

FINAL // UNCLASSIFIED
16 AUGUST 2018

**PROGRAMMATIC AGREEMENT
AMONG
U.S. ARMY GARRISON, HAWAII
THE HAWAI'I STATE HISTORIC PRESERVATION OFFICER,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
ROUTINE MILITARY TRAINING ACTIONS AND RELATED ACTIVITIES AT
UNITED STATES ARMY TRAINING AREAS AND RANGES
ON THE ISLAND OF O'AHU, HAWAI'I**

This version of the Programmatic Agreement **does not** contain protected information and may be publicly released without restriction.

The complete version of this Programmatic Agreement, containing information protected by statute and exempt from public disclosure under the Freedom of Information Act, is on file at the USAG-HI Cultural Resources Office.

CLEARED FOR PUBLIC RELEASE

16 August 2018

**PROGRAMMATIC AGREEMENT
AMONG
U.S. ARMY GARRISON, HAWAII
THE HAWAII STATE HISTORIC PRESERVATION OFFICER,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
ROUTINE MILITARY TRAINING ACTIONS AND RELATED ACTIVITIES AT
UNITED STATES ARMY TRAINING AREAS AND RANGES
ON THE ISLAND OF O'AHU, HAWAII**

WHEREAS, the United States Army Garrison, Hawaii (USAG-HI) has a mission to support military training through the management and maintenance of multiple training areas on the island of O'ahu in the State of Hawai'i; and

WHEREAS, the United States Army Range Division Hawaii (RDH) operates training areas and ranges in accordance with Army Regulation (AR) 350-19 under the direction of the USAG-HI Garrison Commander, and provides oversight and coordination of all USAG-HI training actions and related activities; and

WHEREAS, USAG-HI operates a cultural resources program with a qualified staff of specialists to ensure compliance with applicable laws and regulations; and

WHEREAS, pursuant to AR 200-1, the Army has designated the USAG-HI Garrison Commander to serve as the agency official responsible for compliance with the requirements of Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108, for undertakings within training areas managed by USAG-HI and operated by RDH; and

WHEREAS, in accordance with Section 106 of the NHPA and the implementing regulations at 36 CFR § 800.14(b), this Programmatic Agreement (PA) governs the implementation of multiple undertakings for routine military training and related range management activities associated with the USAG-HI mission and RDH operations; and

WHEREAS, undertakings that may be implemented under this PA are described in Appendix A and include: routine military training; operating, managing, and maintaining multiple Army training areas, ranges, and related infrastructure; and conducting activities to support routine military training; and

WHEREAS, this PA applies to undertakings described in Appendix A performed under the direct or indirect jurisdiction of USAG-HI and RDH by tenant units, non-tenant units, lessees, permittees, and contractors including, but not limited to, the United States Army, Army Reserve, and Army National Guard; other branches of the United States Armed Forces; authorized agents of federal, state or local governments, invited allied forces, and civilian organizations; and

16 August 2018

WHEREAS, the area of potential effect (APE) for this agreement consists of the Army training areas on O‘ahu described in Appendix A, including Schofield Barracks Military Reservation, Kahuku Training Area, Dillingham Military Reservation, Wheeler Army Airfield, Kawaihoa K1-B Training Area, and the Army system of roads and trails on O‘ahu; and

WHEREAS, routine military training and related activities have been ongoing throughout the APE since the early-to-middle 20th century and will continue into the foreseeable future; and

WHEREAS, the term “historic properties” includes those prehistoric or historic districts, sites, buildings, structures or objects included in, or eligible for inclusion in the National Register of Historic Places (NRHP), including properties of traditional religious and cultural importance to Native Hawaiian Organizations that meet the National Register Criteria. Properties that have been determined ineligible for the NRHP with Hawaii State Historic Preservation Officer (SHPO) concurrence are not considered to be historic properties; and

WHEREAS, in accordance with AR 200-1 Part 6-4(b)(9), those prehistoric or historic districts, sites, buildings, structures or objects that are at least 50 years old and for which no formal determination of eligibility has been made (i.e. potential historic properties) shall be treated as eligible historic properties until formal determinations of eligibility are made; and

WHEREAS, identification of historic properties has been accomplished through adequate pedestrian surveys in many portions of the APE (Appendix B); and

WHEREAS, the duded impact area and the targeted high-hazard impact area in Schofield Barracks West Range have been used for high-explosive and incendiary munitions training since the early 20th century and the targeted-high-hazard impact area will continue to be used in this manner; and

WHEREAS, the danger of unexploded ordnance in the duded impact area and targeted high-hazard impact area (Appendix A, figures 7 & 8) precludes historic property identification and evaluation efforts; and

WHEREAS, USAG-HI has determined that previous military training and related activities have had adverse effects on historic properties in the APE, and some undertakings may continue to have adverse effects on historic properties in the APE; and

WHEREAS, the NHPA (54 U.S.C. § 300314) defines Native Hawaiian Organizations (NHOs) as “any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of historic preservation that are culturally significant to Native Hawaiians”; and

16 August 2018

WHEREAS, USAG-HI recognizes the U.S. Department of Defense Instruction *Consultation Policy with Native Hawaiian Organizations* (DODI 4710.03) and Advisory Council on Historic Preservation (ACHP) *Handbook on Consultation with Native Hawaiian Organizations* as their guiding principles for consulting with NHOs; and

WHEREAS, USAG-HI acknowledges that NHOs possess special expertise in assessing the eligibility of properties to which they attach religious and cultural significance; and

WHEREAS, USAG-HI has consulted with the Office of Hawaiian Affairs (OHA) and other NHOs listed in Appendix H who may attach religious and cultural significance to certain properties in the APE; and

WHEREAS, USAG-HI has provided information about this PA to the public through a media release to local news agencies, media outlets, elected officials, and community leaders; has posted project-related documents and information on the USAG-HI website; and has sought public comment and input through those same channels; and

WHEREAS, USAG-HI has invited representatives of local governments, the National Park Service, the Historic Hawaii Foundation and other interested parties to consult regarding the effects of the undertaking on historic properties and they have not participated in consultation; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), USAG-HI has notified the ACHP of its adverse effect determination, and the ACHP is participating in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

WHEREAS, this PA replaces and supersedes the *Programmatic Agreement Among the United States Army Garrison, Hawaii, the Hawai'i State Historic Preservation Office and the Advisory Council on Historic Preservation for Section 106 Responsibilities for the Army Transformation of the 2nd Brigade, 25th Infantry Division (Light) to a Stryker Brigade Combat Team (SBCT) (2004 as amended)* in its entirety; and

NOW THEREFORE, USAG-HI, the Hawaii SHPO, and the ACHP agree that the undertakings shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertakings on historic properties.

16 August 2018

STIPULATIONS

The USAG-HI Garrison Commander shall ensure that the following stipulations are implemented:

I. GENERAL

- A. To the extent feasible, USAG-HI and RDH shall develop and authorize undertakings designed to avoid adverse effects to historic properties.
- B. The USAG-HI Cultural Resource Manager (CRM) is responsible for operational administration of the terms of this PA.
- C. RDH is responsible for receiving training on the PA by the CRM, reviewing training requests for PA applicability, coordinating and cooperating with the USAG-HI CRM to fulfill the terms of the PA, ensuring that all units, contractors, lessees, and permittees who use the training areas are aware of and follow the terms of this PA, and providing written notice to the CRM of any deviation from this PA.
- D. The USAG-HI CRM will work with project proponents to redesign undertakings to avoid or minimize adverse effects to historic properties as necessary.
- E. USAG-HI shall follow the standard Section 106 process defined in Subpart B of 36 CFR Part 800 for undertakings that fall outside the scope of this PA (and other applicable agreements), and shall seek an amendment under Stipulation IV.B to bring the activity within the scope of the PA if appropriate.

II. TRAINING AREA ACTIVITY REVIEW

The USAG-HI CRM, in cooperation with RDH, shall ensure that undertakings are reviewed and processed according to the following stipulations.

A. Undertakings Excluded from Further CRM Review:

- 1. The CRM will not review the following types of routine military training actions and training area management activities because of nature of the activity. RDH staff who have received training specified in Stipulation III.A.3 may authorize these undertakings (as defined in Appendix A and/or illustrated in Appendix D) without further preservation oversight:

16 August 2018

- a. Physical readiness training;
 - b. Maneuver training (no digging);
 - c. Reconnaissance training (no digging);
 - d. Assembly area operations training (no digging);
 - e. Force-on-force training (no digging);
 - f. Aviation training at established areas (as illustrated in Appendix D);
 - g. Deployment training;
 - h. Combat engineer training within established areas (as illustrated in Appendix D);
 - i. Landing zone and drop zone training at established areas (as illustrated in Appendix D);
 - j. Continued use of established live-fire training ranges, including firing points, firing areas, and impact areas (as illustrated in Appendix D);
 - k. Training area configuration, maintenance, and repair (no digging);
 - l. Environmental management (no digging);
 - m. Prescribed burns within the existing firebreak at Schofield Barracks West Range (as illustrated in Appendix D, figure 8).
2. The CRM will not review certain routine military training actions and range management activities because of the location of the activity. RDH staff who have received training specified in Stipulation III.A.3 shall review all proposed undertakings that do not qualify for exclusion under Stipulation II.A.1 to determine their applicability under this section.
- a. The CRM will create maps of “approved areas” (Appendix E) and provide those to RDH at least annually, or whenever the maps are revised in accordance with Stipulation V.B.

16 August 2018

- b. Locations of “approved areas” shall be based on the extent of intensive historic property surveys, excluding the locations of identified historic properties or potential historic properties, plus a 15 meter buffer around them. Approved areas also exclude the sensitive Jaucas soils present within Dillingham Military Reservation.
- c. RDH shall determine if this stipulation applies by comparing the location of a proposed undertaking to “approved area” maps provided by the CRM.
- d. RDH may approve undertakings without CRM review if the undertakings are located in an “approved area” as specified in Appendix E.
- e. As soon as Range Division determines that a proposed undertaking falls outside of an approved area and Stipulation II.A.1. does not apply, they shall forward the undertaking to the CRM for review under Stipulation II.B.

B. Undertakings Reviewed by the CRM

The CRM shall review all undertakings that do not qualify for exclusion under Stipulation II.A. before those undertakings may be authorized by RDH.

- 1. If an undertaking is proposed outside of an approved area, the CRM shall:
 - a. Establish the project APE to account for direct and indirect effects.
 - b. Determine whether historic properties are present in the project APE.
 - (1) If the project APE has not been previously surveyed for historic properties, or previously disturbed to the extent that no potential historic properties are present, the CRM shall make a reasonable and good faith effort to identify historic properties in the project APE using appropriate techniques specified in Appendix F.

16 August 2018

- (2) If the project APE has not been previously surveyed for historic properties, or previously disturbed to the extent that no potential historic properties are present, the CRM shall make a reasonable and good faith effort to identify historic properties in the project APE using appropriate techniques specified in Appendix F.
 - (a) USAG-HI shall notify Consulting Parties identified in Appendix H whenever a new survey is proposed and shall request information from them about potential historic properties, including properties of traditional religious and cultural importance, which may be present within, in the vicinity of the survey area.
 - (b) Consulting Parties may respond to the notification within 30 calendar days of receipt, and may request a consultation meeting if they wish to share information with USAG-HI or discuss the survey.
- (3) If no potential historic properties are identified during these efforts, USAG-HI shall provide a report of the identification efforts to the SHPO and Consulting Parties identified in Appendix H.
 - (a) Upon receipt of the report, the SHPO and Consulting Parties shall have 30 calendar days to review and provide comments on the adequacy of identification efforts to USAG-HI in writing or by email.
 - (b) USAG-HI shall consider any timely comments received and shall respond to the commenting party as appropriate.
 - (c) If potential historic properties are identified during these efforts, USAG-HI shall prepare a report describing the identification efforts and the properties identified, and shall provide it to the SHPO and Consulting Parties identified in Appendix H.

16 August 2018

- (d) USAG-HI shall not include determinations of eligibility in the report of identification efforts and shall not make determinations of eligibility until after concluding consultation with the SHPO and Consulting Parties.
- (e) USAG-HI shall request the SHPO and Consulting Parties to comment on the adequacy of identification efforts and to consult with USAG-HI on NRHP eligibility of identified properties.
- (f) Upon receipt of the report, the SHPO and Consulting Parties shall have 45 calendar days to provide written comments by mail or email, or request face-to-face consultation with USAG-HI if they so choose.
- (g) Depending on the level of interest expressed by the SHPO and Consulting Parties, consultation may involve face-to-face meetings, site visits, or simply accepting written comments.
- (h) If the SHPO or Consulting Parties do not respond within 45 calendar days of the receipt of the report, USAG-HI shall assume that those parties have no concerns about the identification efforts or the NRHP eligibility of identified properties.
- (i) After conducting face-to-face consultation if requested, but no less than 45 calendar days after distributing the report to the SHPO and Consulting Parties, USAG-HI shall conclude the consultation.
- (j) USAG-HI shall make determinations of NRHP eligibility by taking into account the views of the SHPO and Consulting Parties, considering the applicable aspects of integrity, and applying the National Register criteria specified in 36 CFR § 60.4.

16 August 2018

- (k) USAG-HI shall summarize the results of eligibility consultation and distribute the summary with the determinations of eligibility to SHPD and Consulting Parties.
 - (l) If the SHPO or Consulting Parties do not agree with the USAG-HI determination of eligibility, the parties shall follow procedures in 36 CFR § 800.4(c)(2) to resolve the issue.
 - c. Coordinate with RDH and the proponent to redesign the undertaking or apply appropriate protection measures if historic properties (including potential historic properties) are present within a proposed project APE. Protection measures may include, but are not limited to:
 - (1) Installing Siebert stakes to mark off-limit areas;
 - (2) Installing signs to identify specific allowable or prohibited activities or identify designated travel routes;
 - (3) Erecting temporary or permanent fencing around historic properties to prevent encroachment.
 - d. Make a finding of effect.
 - (1) If no historic properties (or potential historic properties) are present within the project APE, including those project APEs that have been redesigned to avoid historic properties in accordance with Stipulation II.B.1.c., the CRM shall, make a finding of “no historic properties affected.”
 - (a) The CRM shall provide a memorandum to RDH to proceed with the undertaking.
 - (b) USAG-HI shall document the identification efforts and finding of effect in the Stipulation IV.G. report.
 - (c) USAG-HI shall propose updates to applicable appendices for review in accordance with Stipulation V.B. accordingly.

16 August 2018

- (2) If historic properties are present in the APE and protection measures are sufficient to preserve integrity and prevent alteration of the characteristics that qualify the property for inclusion in the NRHP, the CRM shall make a finding of “no adverse effect.”
 - (a) The CRM shall provide a memorandum to RDH to proceed with the undertaking with required avoidance and/or minimization methods.
 - (b) USAG-HI shall document the finding for the Stipulation IV.G. report.
 - (c) USAG-HI shall propose updates to applicable appendices for review in accordance with Stipulation V.B. accordingly.
- (3) If historic properties are present and the CRM determines that protection measures will not be sufficient to preserve the integrity of the historic property, the CRM shall notify RDH of a potential “adverse effect” finding.
 - (a) The CRM shall provide a memorandum to the RDH with a recommendation to either cancel the proposed undertaking or revise it to avoid adverse effects to historic properties.
 - (b) If RDH and the proponent need to advance the undertaking as proposed, the CRM shall make a finding of adverse effect and conclude the review in accordance with 36 CFR § 800.6(b)(1) in consultation with the SHPO and Consulting Parties identified in Appendix H.
 - (i) The CRM shall initiate consultation to resolve adverse effects within 15 calendar days of making the adverse effect finding.

16 August 2018

- (ii) Consultation shall include one or more meetings among USAG-HI, the SHPO, and Consulting Parties identified in Appendix H to discuss the resolution of adverse effects.
- (iii) Resolution of adverse effects will be developed in consultation with the SHPO and Consulting Parties identified in Appendix H and documented in a Memorandum of Agreement (MOA) between USAG-HI and the SHPO.
- (iv) Options for resolution of adverse effects may include, but are not limited to:
 - (a) Data recovery at archaeological sites guided by a formal data recovery plan;
 - (b) Additional protection measures such as buffer zones or training avoidance “minefields”;
 - (c) Documentation of buildings, structures, or districts in accordance with Historic American Building Survey, Historic American Engineering Record, or Historic American Landscape Survey standards, as appropriate;
 - (d) Gathering and synthesizing information, such as oral histories and archival documents, from NHOs who may have knowledge about properties of traditional religious and cultural significance, if that work has not yet been accomplished per Stipulation 3.D.2.a.

16 August 2018

- (v) The CRM shall document the finding for the Stipulation IV.G. report.
 - (vi) USAG-HI shall propose updates to applicable appendices for review in accordance with Stipulation V.B. accordingly.
- 2. If a new type of training or related activity is proposed to become routine, or if routine type training is proposed within a training area where it is not routinely conducted (as described in Appendix A), USAG-HI shall follow Stipulation I.E. and at the conclusion of that consultation shall propose an amendment to the PA per Stipulation IV.B.

C. Undertakings Involving Unexploded Ordnance

Investigation and disposal of unexploded ordnance (UXO) are critical aspects of training area management, but the risks associated with these types of undertakings preclude standard field survey efforts to identify historic properties and potential effects in the vicinity of suspected UXO.

- 1. When suspected UXO is found in a training area and reported to RDH, RDH will notify the explosive ordnance disposal (EOD) team, and provide the location of the discovery to the CRM.
- 2. The EOD team will investigate to identify the item, determine if it is hazardous, and decide whether it can be removed or must be destroyed in place. Investigations may include digging with hand tools around the item to expose and identify critical components.
- 3. While the EOD investigation is ongoing, the CRM will review existing records to determine what is known about the location, if historic properties may be affected, and if protective measures are appropriate to minimize potential effects.
- 4. Protective measures may include placing sand bags or other material around a suspected UXO to reduce the blast radius and/or installing sand bags or other material in front of vulnerable aspects of historic properties to prevent damage from the UXO disposal.

16 August 2018

5. The EOD team shall remove the item if it is safe to do so. If the item cannot be safely removed, the EOD team shall employ protective works if they are determined to be necessary by the CRM, and shall destroy the item in place.
6. After removal or destruction of the UXO and if the area is safe to enter, the CRM shall follow-up with identification efforts if the area has not been surveyed, or a condition assessment if historic properties are present.
 - a. The CRM shall document the EOD activity and any identification efforts in the Stipulation IV.G. report.
 - b. USAG-HI shall update or propose modifications to applicable appendices for review in accordance with Stipulation V.B. accordingly.

III. ACTIVITIES TO SUPPORT PROJECT REVIEWS

A. Staffing and Funding

1. All identification, evaluation, and treatment efforts shall be conducted under the supervision of personnel who meet applicable professional qualifications.
 - a. Agency personnel who conduct identification, evaluation, or treatment of historic properties and potential historic properties shall meet the professional qualification standards established by the Office of Personnel Management for their respective disciplines in accordance with Section 112 of the NHPA (54 USC §306131).
 - b. Contractors who conduct identification, evaluation, or treatment of historic properties or potential historic properties on behalf of USAG-HI shall meet Secretary of Interior's Professional Qualification Standards for their respective discipline (36 CFR Appendix A to Part 61) or shall work under the direction of someone who meets those standards.

16 August 2018

2. USAG-HI shall annually, for the life of the this agreement, request funding to fulfill mitigation commitments, conduct cultural resource inventory and evaluation, install and maintain site protection measures, conduct site visits and condition assessments, provide education and training about NHPA requirements, complete reporting requirements, curate artifacts, maintain records of surveys and historic properties, and implement any other terms and conditions of this agreement.
3. The CRM shall provide training to RDH staff regarding their roles and responsibilities under this PA and the requirements of the NHPA in general. The CRM shall provide this training at least annually, and within 60 calendar days of arrival of a new RDH staff member who may have responsibilities under this agreement.

B. Identification and Evaluation of Historic Properties

1. Identification and evaluation efforts will follow procedures described in Appendix F and will be accomplished in consultation with the SHPO and Consulting Parties identified in Appendix H.
2. Following procedures in Appendix F, USAG-HI CRM will continue historic property identification efforts in those portions of the training areas that have not been previously surveyed and are currently used, or will be used, for training actions and related activities.
3. Following procedures in Appendix F, USAG-HI CRM will continue historic property evaluations in the training areas and will prioritize evaluation efforts based on the nature of training in the vicinity of the property, the potential for reduction of training area fragmentation, and other issues of concern identified in consultation with the SHPO and Consulting Parties identified in Appendix H.
4. USAG-HI shall submit reports of identification and evaluation efforts for review to the SHPO and Consulting Parties identified in Appendix H in accordance with the report review procedures defined in Stipulation II.B.1.b.

16 August 2018

C. Historic Property Condition Assessment

The CRM shall routinely assess the condition of select historic properties in the training areas. The purpose of historic property condition assessments is to document the nature and extent of effects or changes over time, whether from training and related activities, natural forces, or other causes; to evaluate the effectiveness of protection measures and to repair, replace, or enhance protection measures as appropriate; to identify where additional protection measures may be necessary; and to provide SHPO and Consulting Parties with assurances that historic properties are being managed appropriately. Condition assessments will not be used to evaluate NRHP eligibility, but results of condition assessments may indicate the need for a reconsideration of eligibility.

1. USAG-HI shall, in consultation with SHPO and Consulting Parties identified in Appendix H, develop a historic property condition assessment plan within eighteen months of execution of the PA, including a list of historic properties to assess, a schedule for assessments, and procedures for distributing the results of the assessments.
2. The CRM shall summarize the historic property condition assessments for inclusion in the Stipulation IV.G. report.

D. Programmatic Resolution of Adverse Effects

1. Certain types of adverse effects cannot be resolved individually and will be resolved programmatically through this PA. These include:
 - a. Adverse effects caused by ongoing use of the live-fire ranges, including the targeted high-hazard impact area;
 - b. Adverse effects caused by ongoing use of training areas that may be occur later in time, be farther removed in distance, or be cumulative;
 - c. Adverse effects associated with investigation and disposal of unexploded ordnance; and

16 August 2018

- d. Adverse effects resulting from emergency situations under Stipulation IV.E., including but not limited to, emergencies declared by the President or the Governor of Hawaii or actions taken to protect human health and property as a result of UXO or wildfire.
2. The adverse effects listed above are resolved through implementation of the following programmatic treatments, which were developed in consultation with the SHPO, the ACHP, and the Consulting Parties identified in Appendix H.
- a. In consultation the Consulting Parties identified in Appendix H, and with guidance and information from the people and families with generational knowledge of the areas, USAG-HI shall prepare a report documenting, analyzing, and synthesizing information about traditional religious and cultural properties, places, beliefs, and practices in and around the training areas
 - (1) The USAG-HI CRM staff will initiate this report process within 90 calendar days of the execution of this PA, and will work with Consulting Parties identified in Appendix H to develop a report outline, scope of work, and project schedule within the first year of this PA. The schedule will include a timeframe for completion.
 - (2) As additional funds become available, the process may be augmented, expedited, or completed by acquiring supporting services through one or more contract(s), grant(s), or cooperative agreement(s) as appropriate.
 - b. USAG-HI, with support from U.S. Army Training Support Systems and in consultation with the Consulting Parties listed in Appendix H, shall produce a short educational video, featuring NHOs, to inform users of the training ranges about the significance of Native Hawaiian cultural resources, the connection between the training areas and the Hawaiian people, and on the proper ways to show respect for the lands and the resources.

16 August 2018

- c. USAG-HI will consider requests from Consulting Parties and other NHOs to conduct visits or stewardship activities at historic properties and cultural sites outside of duded impact areas according to the following stipulations:
- (1) Entry into U.S. Army lands may be granted in accordance with AR 350-19 and contingent on safety concerns, military training requirements, and available Army support staff.
 - (2) Entry into areas known, or suspected, to contain unexploded ordnance is prohibited.
 - (3) Entry into non-duded or subsurface cleared impact areas will be coordinated with, and approved by, the RDH Range Management Authority. Entry into other range and training lands not used as impact areas will be approved by the USAG-HI Garrison Commander in coordination with the RDH Range Management Authority. Entry into areas under USAG-HI control, but not designated as range and training land, will be approved by the USAG-HI Garrison Commander.
 - (4) Requests from Consulting Parties and other NHOs must be submitted by email or in writing to the CRM, who will coordinate with the RDH Range Management Authority and the USAG-HI Garrison Commander as appropriate. Requests must include contact information, the specific site or location proposed, the purpose of the request or a description of proposed activities, names of all attendees, and proposed date and time frame.
 - (5) Requests must be submitted at least 14 calendar days in advance of the proposed date. Requests to conduct site visits or stewardship activities during normal business hours are more easily accommodated and more likely to be approved.
 - (6) USAG-HI shall respond to the requestor in writing or by email with a decision on the request within seven (7) calendar days of receipt.

16 August 2018

- d. USAG-HI, with assistance from U.S. Army Training Support Systems and RDH, and in accordance with Army policy, shall develop and provide virtual visits of historic properties, potential historic properties, and other site or areas of cultural importance or concern within the duded impact area and other inaccessible areas utilizing photographs, videos, and virtual reality displays created through unmanned aerial vehicle (UAV) applications. Within one year of execution of this PA, USAG-HI shall consult with the SHPO and Consulting Parties identified in Appendix H to develop a plan for these virtual visits.

IV. ADMINISTRATIVE STIPULATIONS

A. Duration

1. This PA will expire 15 years from the date of its execution, which is the date the PA is signed by the ACHP.
2. Prior to expiration of the PA, the Signatories may consult to reconsider or renew the terms of the PA and amend it in accordance with Stipulation IV.B.

B. Amendments

1. Any Signatory may propose an amendment to this PA by providing written notification of a proposed amendment to the other Signatories. The notice must provide an explanation of the proposed amendment and a justification of the need for such an amendment.
2. USAG-HI shall notify Consulting Parties identified in Appendix H about any amendments proposed by the Signatories. USAG-HI shall request that Consulting Parties provide input, if any, on the proposed amendment within 30 calendar days of notification, including whether they may feel a consultation meeting is appropriate for consideration of the proposed amendment.
3. This PA may be amended when such an amendment is agreed to in writing by all Signatories and shall become effective on the date the amendment is signed by the ACHP.

16 August 2018

4. A formal amendment to the PA is not required to update appendices listed in Stipulation V.A. The process for updating appendices is specified in Stipulation V.B.
5. USAG-HI will maintain the most current version of the PA and appendices and will provide them to the SHPO and Consulting Parties identified in Appendix H upon request.
6. USAG-HI shall make a version of the PA publically available on the USAG-HI website without historic property location maps and other sensitive information. Information about the nature and location of historic properties, including potential historic properties and properties of traditional religious and cultural importance, shall be protected in accordance with Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resources Protection Act as appropriate.

C. Dispute Resolution

1. Should any Signatory object at any time to the manner in which the terms of this PA are implemented, USAG-HI shall consult with such party to resolve the objection. If USAG-HI determines that such objection cannot be resolved, USAG-HI shall:
 - a. Forward all documentation relevant to the dispute, including USAG-HI's proposed resolution, to the ACHP. The ACHP shall provide USAG-HI with its advice on the resolution of the objection within 30 calendar days of receiving adequate documentation. Prior to reaching a final decision on the dispute, USAG-HI shall prepare a written response that takes into account previous input from Signatories, any timely advice or comments regarding the dispute from the ACHP, and provide all parties with a copy of this written response. USAG-HI will then proceed according to its final decision.
 - b. If the ACHP does not provide its advice regarding the dispute within the 30 calendar day time period, USAG-HI may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the USAG-HI shall prepare a written response that takes into account any comments regarding the dispute from the Signatories, and provide all parties with a copy of such written response.

16 August 2018

2. Should any member of the public object to the manner in which USAG-HI is implementing the terms of this PA, they may raise their objection to the USAG-HI Garrison Commander. If the objection is relevant to the manner in which USAG-HI is implementing the terms of the PA, USAG-HI shall acknowledge receipt of the objection within 30 calendar days and will attempt to resolve PA compliance objections. When resolution of objections might require an amendment to the PA, USAG-HI will discuss the way forward with Signatories and other Consulting Parties. Objecting parties will be notified of programmatic corrective actions to ensure awareness of USAG-HI's efforts to be in full compliance with PA requirements.
 - a. If USAG-HI receives one or more objections that have no relevance to the implementation of the PA, USAG-HI has no requirement to address such objections.
 - b. USAG-HI shall report applicable PA compliance objections raised by a member of the public and the resolution of those objections in the annual report per Stipulation IV.G.
3. USAG-HI's responsibility to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

D. Termination

1. If any Signatory to this PA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other Signatories to attempt to develop an amendment per Stipulation IV.B. If within 30 calendar days (or another time period agreed to by all Signatories) an amendment cannot be reached, any Signatory may terminate the PA upon written notification to the other Signatories.
2. Once the PA is terminated, and prior to work continuing on these undertakings, the USAG-HI must either:
 - a. Follow the standard Section 106 process defined in Subpart B of 36 CFR 800 for each undertaking; or
 - b. Execute a Memorandum of Agreement pursuant to 36 CFR § 800.6; or

16 August 2018

- c. Request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7.
3. USAG-HI shall notify the Signatories as to the course of action it will pursue.

E. Emergency Situations

1. If an emergency situation in a training area creates a threat to life or property and precludes project review under Stipulation II of this agreement, the CRM shall notify the Signatories and Consulting Parties identified in Appendix H of the emergency situation by email as soon as possible, no later than the next business day.
2. All rescue and salvage operations necessary to preserve life or property may be conducted immediately.
3. USAG-HI shall make reasonable and prudent efforts in coordination with the CRM to avoid or minimize effects to historic properties during the implementation of emergency response actions.
4. If the nature of the emergency situation allows for such coordination, the SHPO and Consulting Parties identified in Appendix H may provide advice or assistance to the USAG-HI within seven (7) calendar days from notification of the emergency.
5. Within 30 calendar days of resolution of the emergency situation, USAG-HI shall submit a report to Signatories and Consulting Parties identified in Appendix H documenting the emergency situation, the actions taken, and any historic properties or potential historic properties affected. Emergency situations shall also be included in the report described in Stipulation IV.G.

F. Post-Review Discoveries

1. In the event that potential historic properties are discovered during the implementation of an undertaking, USAG-HI shall follow the procedures set forth in the post-review discovery plan in Appendix G.

16 August 2018

2. If the discovery includes Native Hawaiian human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony and is located on land owned or controlled by the U.S. Army, USAG-HI shall immediately protect the remains from damage and exposure to the elements and implement the inadvertent discovery regulations of the Native American Graves Protection and Repatriation Act (25 U.S.C. § 32), as specified in 43 CFR § 10.4.

G. Reporting

1. USAG-HI shall prepare a written annual report listing actions and reviews conducted pursuant to this PA. The reporting period shall be the calendar year from January 1 to December 31.
2. USAG-HI shall distribute the annual report to Signatories and Consulting Parties identified in Appendix H no later than March 31 of each year.
3. Distribution to Signatories and Consulting Parties may occur by mail, in person, or electronically via email, file transfer, or other means.
4. USAG-HI shall make a version of the annual report without sensitive information available to the general public on the USAG-HI website and shall keep an archive of previous annual reports available on the website.
5. The report shall address applicable reviews, actions, and other issues over the reporting year, including:
 - a. A list of undertakings reviewed under Stipulations II.B and II.C;
 - b. A list of historic property surveys completed in the reporting year and any newly identified historic properties or potential historic properties found during those surveys;
 - c. A summary of condition assessment efforts in accordance with Stipulation III.C;
 - d. The status of the NRHP evaluations specified in Stipulation III.B.2;

16 August 2018

- e. Any disputes or objections received and how they were resolved;
 - f. Any completed or proposed PA amendments or appendix updates;
 - g. Any post-review discoveries or emergency situations and the outcomes;
 - h. Any issues that are affecting or may affect the ability of the USAG-HI to meet the terms of the PA, including any deviations from the PA;
 - i. A summary of PA trainings conducted per Stipulation III.A.3, including training dates and number of participants; and.
 - j. The status of programmatic resolution commitments in Stipulation II.D, including a list of site visits and stewardship activities conducted with Consulting Parties and NHOs;
6. USAG-HI shall host a regular meeting with Signatories and Consulting Parties identified in Appendix H to review the implementation and terms of the PA.
- a. The meeting shall occur annually for four years after execution of the PA. During the fourth annual meeting, the parties shall consult to determine the appropriate timeframe for subsequent meetings;
 - b. Each meeting shall occur no earlier than 30 calendar days after distributing the annual report; and
 - c. USAG-HI shall document and distribute meeting notes within 30 calendar days after each meeting.

H. Anti-Deficiency Act

The Army's obligations under this PA are subject to the availability of appropriated funds, and the stipulations of this PA are subject to the provisions of the Anti-Deficiency Act (31 U.S.C. § 1341). USAG-HI shall make reasonable and good faith efforts to secure the necessary funds to implement this PA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs the Army's ability to implement the stipulations of this PA, USAG-HI shall consult in accordance with the amendment and termination procedures found in Stipulations IV.B and IV.D of this agreement.

V. APPENDICES

A. The following appendices are incorporated with this agreement:

Appendix A – Descriptions of Routine Military Training Actions and Related Activities at U.S. Army Training Areas on O‘ahu

Appendix B – Maps and Lists of Surveyed Areas Determined Adequate per 36 CFR § 800.4b and for the Purposes of this PA

Appendix C – Maps and Lists of Historic Properties and Potential Historic Properties within the Training Areas (Excluding Historic Buildings and Structures within Schofield Barracks Cantonment and Wheeler Army Airfield)

Appendix D – Maps of Established Areas (as specified in Stipulation II.A.1)

Appendix E – Maps of Approved Areas (as specified in Stipulation II.A.2)

Appendix F – Standard Identification, Documentation and Evaluation Methods

Appendix G – Post-Review Discovery Plan

Appendix H – Consulting Parties

B. Appendices may be updated without formal amendment to this agreement.

1. USAG-HI shall, on a quarterly basis, assess the need to update appendices B, C, D and E with applicable information about surveys and historic properties based on report reviews completed per Stipulation II.B.1 in the previous quarter.
2. As soon as appendix is updated, USAG-HI shall distribute the updated appendix to all Signatories and Consulting Parties identified in Appendix H.
3. USAG-HI shall maintain a list of appendix updates to track changes over time and ensure that the most current appendices are available to Signatories and Consulting Parties at their request.

16 August 2018

4. Signatories may propose modifications to the other appendices (A, F, G, and H) as necessary.
 - a. The proposing Signatory shall send the proposed modification to the other Signatories and Consulting Parties for a 45 calendar-day review and shall host a consultation meeting to discuss the proposal, if requested by Signatories or Consulting Parties identified in Appendix H.
 - b. If the Signatories agree, USAG-HI shall incorporate the revised appendix and distribute it electronically to Signatories and Consulting Parties identified in Appendix H.

(REMAINDER OF THIS PAGE INENTIONALLY LEFT BLANK)

FINAL //UNCLASSIFIED
16 August 2018

Execution of this PA by the USAG-HI, the Hawaii SHPO, and the ACHP, and implementation of its terms evidence that the Army has taken into account the effects of these undertakings on historic properties and afforded the ACHP an opportunity to comment.

SIGNATORIES:

U.S. Army Garrison, Hawaii


Colonel Thomas J. Barrett, U.S. Army, Commanding

Date: 21 AUGUST 2018

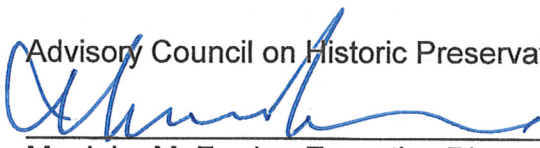
Hawaii State Historic Preservation Officer


~~Ms. Suzanne D. Case, Chairperson, Department of Land and Natural Resources~~

Date: 8.22.18

ALAN DOWNER, Deputy SHPO

Advisory Council on Historic Preservation


Mr. John M. Fowler, Executive Director

Date: 8/24/18

FINAL // UNCLASSIFIED

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A

Programmatic Agreement Regarding Routine Military Training Actions and Related Activities at U.S. Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Descriptions of Routine Military Training Actions and Related Activities at U.S. Army Training Areas on O‘ahu

Appendix A – Descriptions of Routine Military Training and Related Activities

1.	Introduction	2
2.	Routine Military Training and Related Activity	2
2.1	Types of Training	3
2.1.1	Physical Readiness Training	4
2.1.2	Maneuver Training	4
2.1.3	Reconnaissance Training	5
2.1.4	Assembly Area Operations Training	5
2.1.5	Force-on-Force Training	6
2.1.6	Aviation Training	7
2.1.7	Deployment Training	7
2.1.8	Combat Engineer Training	7
2.1.9	Landing Zone, and Drop Zone Training	8
2.1.10	Live-Fire Training	8
2.2	Related Actions	9
2.2.1	Training Area Configuration, Maintenance, and Repair	10
2.2.2	Explosive Ordnance Disposal	10
2.2.3	Environmental Management	11
3.	Army Training Areas	12
3.1	Island of O‘ahu	12
3.1.1	Schofield Barracks Military Reservation (SBMR)	12
3.1.2	Dillingham Military Reservation (DMR)	15
3.1.3	Kahuku Training Area (KTA)	15
3.1.4	Wheeler Army Airfield (WAAF)	16
3.1.5	Kawailoa Training Area K1B	16
3.1.6	O‘ahu Roads and Trails System (ORT)	17
3.2	Training Area Activity Matrix	18
4.	References	19
4.1	Army Unit Organization Chart	19
4.2	Acronyms	20
4.3	Glossary	21

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Appendix A – Descriptions of Routine Military Training and Related Activities

1. Introduction

The U.S. Army conducts routine military training actions and manages multiple training areas on the island of O‘ahu.

Section 106 of the National Historic Preservation Act (NHPA) [16 U.S.C. § 470f] requires the Army to consider the effects of that training and training area management, on places that are important in American and Hawaiian history and culture, and to find ways to prevent or reduce harmful effects to those places.

The Army intends to comply with Section 106 of the NHPA by developing and implementing a programmatic agreement (PA) to resolve adverse effects that may result from routine training and related activity. This PA for routine training will replace the existing PA for Stryker Brigade transformation, which expires on December 31, 2017 and has limited utility after the departure of the Stryker brigade.

The PA for routine training will be developed through consultation with the Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Officer (SHPO), Native Hawaiian Organizations (NHOs) and other consulting parties, as well as by incorporating input from the public-at-large.

This document has been prepared in support of the PA and is intended to provide a general description of types of routine military training actions and related activities (the undertaking) that will be taken into account under the PA, along with descriptions of those Army training areas (the area of potential effect) that will be covered by the PA.

Note: A list of acronyms used in this Appendix is presented on in Section 4.2 on page 19. A glossary of terms used in this Appendix is presented in section 4.3 beginning on page 20.

2. Routine Military Training and Related Activity

For the purposes of the PA, routine military training is defined as those types of training actions regularly conducted in Army training areas. Activities related to military training include configuration, maintenance, and repair of the ranges, facilities, utilities and other infrastructure at training areas; explosive ordnance disposal; cultural resources management; natural resources management; and wildland fire management.

This document addresses routine military training and related activity conducted at six training areas on O‘ahu. The training areas are described in more detail in Section 3.

The locations and extents of the training areas are shown in Figure 1 and include:

- Schofield Barracks Military Reservation (SBMR), which consists of
 - Schofield Barracks Cantonment (SBC)

Appendix A – Descriptions of Routine Military Training and Related Activities

- Schofield Barracks East Range (SBE)
- Schofield Barracks West Range (SBW)
- Schofield Barracks South Range (SBS)

- Dillingham Military Reservation (DMR)
- Kahuku Training Area (KTA)
- Wheeler Army Airfield (WAAF)
- Kawaihoa K1B Training Area (K1B)
- The O'ahu Roads and Trails System (ORT)

The Army conducts routine military training both at the individual soldier level and collectively as units. Individual training is the foundation of unit readiness and incorporates the proficiencies of individuals to perform specific tasks related to an assigned position and skill level. This includes individual weapons qualification and a multitude of other tasks required of individual soldiers, such as physical readiness training. Collective training actions are conducted by all Army units, including infantry, aviation, and engineer brigades; combat support and combat service support units; and division artillery.

Other organizations that may conduct training actions in Army training areas include, but are not limited to:

- U.S. Army Reserves
- U.S. Marine Corps
- U.S. Airforce
- U.S. Navy
- Hawai'i Army National Guard
- special operations forces
- other federal agencies
- law enforcement
- firefighters
- invited foreign allies

Any organization authorized to use the Army training areas listed above will be subject to the requirements of the PAs.

2.1 Types of Training

Routine training actions can generally be grouped into the following ten categories, which are discussed in greater detail in the subsequent sections:

- Physical Training
- Maneuver Training
- Reconnaissance Training
- Assembly Area Operations
- Force-on-Force Training

Appendix A – Descriptions of Routine Military Training and Related Activities

- Aviation Training
- Deployment Training
- Combat Engineer Training
- Landing Zone and Drop Zone Training
- Live-Fire Training

2.1.1 Physical Readiness Training

Physical Readiness Training (PRT) is the basic physical conditioning required of each soldier and unit. PRT prepares soldiers for the physical challenges of fulfilling the mission by improving strength, stamina, agility, resilience, and coordination. Training actions consist of individuals or units conducting a variety of conditioning and strength training exercises such as running, lifting, and calisthenics. PRT is routinely conducted throughout SBMR and WAAF, including at confidence obstacle courses located at SBE, SBW, and SBS.

2.1.2 Maneuver Training

Maneuver training is the primary military tactical training and includes battlefield movement by vehicle (mounted maneuvers) and on foot (dismounted maneuvers). Maneuver training is usually conducted at the platoon (16-40 soldiers) or company (100-200 soldiers) level, but may occasionally involve a battalion (500-900 soldiers).

Mounted maneuvers are conducted on roads and trails and wherever terrain, vegetation density, slope, and administrative factors allow within designated areas. On O'ahu, off-road mounted maneuvers are permitted only at vehicle-accessible landing zones and drop zones, and in designated maneuver training ranges such as a battle area complex (BAX) facility, which was renamed the "multi-purpose range complex" (MPRC) after the Stryker brigade departed. There are no off-road "free maneuver" areas on O'ahu. Mounted maneuvers may be conducted with a wide variety of light, medium and heavy wheeled tactical and logistical vehicles to transport troops, equipment, and supplies. Vehicles range from small four-wheeled Humvees (HMMWVs) to large multi-axel tractor trailers. All Army wheeled vehicles are narrow enough to be driven on public roads.

Tanks and other tracked combat vehicles are not used on O'ahu training areas. Tracked heavy equipment, such as bulldozers and track hoes, are used in designated engineer areas and locations specifically approved for mechanical excavation.

Mounted maneuvers may also involve rotary aircraft including a variety of helicopters, such as the UH-60 Blackhawk and CH-47 Chinook, as well as the Marine V-22 Osprey tilt-rotor aircraft.

Dismounted maneuvers may occur anywhere that safety or administrative restrictions permit, but are most frequently conducted along roads and trails with vehicular support. Dismounted maneuvers are one of the primary actions conducted during jungle warfare training in Schofield Barracks East Range (SBE) by the Jungle Operations Training Center (JOTC), which focuses on survival skills, land navigation, waterborne travel, and jungle combat techniques.

Waterborne maneuvers are conducted using inflated rucksacks or inflatable boats with paddles, in the South Fork of Kaukonahua Stream within SBE.

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities

Maneuver training may entail the use of defensive fighting positions, which can range from soldiers lying in concealed positions, to digging individual fighting positions using hand tools, up to large crew-served weapons emplaced using heavy equipment excavators. The type and size of defensive fighting position is based on the training scenario and the amount of time at a given location. Individual fighting positions are dug by hand and usually encompass at least two square meters and extend from 18 inches to four feet deep. Larger positions for crew-served weapons may be hand-dug or machine-excavated, encompass 20-30 square meters, and be four feet deep or more. Digging and excavation is conducted according to the standard operating procedures (SOP), and is only conducted in approved areas where historic properties are absent..

Where permitted by Army command during maneuver training in Army training areas, units may use a variety of techniques to replicate battlefield environments including blank ammunition, riot control agents such as tear gas, smoke generators, and pyrotechnic (sound, light, smoke) charges to simulate artillery and mortar fire. The purpose of these techniques is to condition units for operations in a battlefield by providing realistic environmental conditions. The use of blank ammunition, riot control agents, and pyrotechnic charges is *not* considered to be live-fire. Maneuver training with live-fire is specifically addressed in Section 2.1.10.

Maneuver training is routinely conducted in all O'ahu training areas and along the ORT.

2.1.3 Reconnaissance Training

Typical reconnaissance training involves small units, from squad to platoon strength (4 to 40 Soldiers), patrolling on foot. Reconnaissance training is another primary jungle warfare training activity conducted by JOTC in SBE. This training may take place in all types of terrain, as well as on roads and trails.

In many respects, reconnaissance training resembles dismounted maneuver training, but does not involve excavating large defensive fighting positions and does not have the same type of vehicular support. Small, hasty defensive fighting positions may be constructed using available terrain and natural material to provide temporary shelter and cover. Construction material is limited to dead or downed trees and low-growing vegetation. Rocks may not be used to construct defensive fighting positions.

No live-fire is involved in reconnaissance training, although blank ammunition may be used where allowed.

Reconnaissance training is routinely conducted on the ORT and at all O'ahu training areas except Wheeler Army Airfield.

2.1.4 Assembly Area Operations Training

Assembly area operations training supports the logistical mission of the Combat Support (CS) and Combat Service Support (CSS) units. It entails setting up camp areas, bivouacs, and other logistics for rest, resupply, maintenance, storage, communications, command post, medical

Appendix A – Descriptions of Routine Military Training and Related Activities

facilities, or meal preparation. Assembly areas vary depending on unit size and mission. The size of assembly areas can range from less than two acres for a squad or platoon (4-40 soldiers) to more than 20 acres for a company (up to 200 soldiers).

Depending on unit size and training mission, assembly area sites may contain a vehicle and weapons maintenance area, vehicle parking area, general supply area, munitions supply area, medical area, and vehicle off-loading area. An assembly area site may consist of a series of tents, temporary structures, and equipment. Bivouacs and tents provide sleeping/living areas, command posts, maintenance shops, and supply storage.

Assembly areas are normally located in level or gently rolling areas with vehicle access. Assembly area sites often include security measures such as barbed wire, observation posts, patrols, and defensive positions. Defensive fighting positions at assembly areas are constructed using sandbags and are not dug or excavated. Heavy machinery may be used to unload and position supplies and equipment.

Seawater purification training may be a component of Assembly Area Training and is often conducted on Mokulē'ia Army Beach at Dillingham Military Reservation (DMR). Seawater purification training is conducted using hoses, pumps, and filters to supply potable water. No digging or excavation is necessary, or permitted, for seawater purification training.

Assembly area training is routinely conducted in all O'ahu training areas except Kawaihoa K1B and along the ORT.

2.1.5 Force-on-Force Training

A typical force-on-force training involves non-live-fire maneuvers by combat troops over a relatively large area with the involvement and assistance of CS and CSS units. This type of training is often conducted at a large scale involving multiple units from the company up to the battalion level (100-900 soldiers). Occasionally, brigade-level training is conducted with a potential of up to 5000 Soldiers spread out over multiple training areas and ranges.

Specific military training actions in a force-on-force exercise normally include mounted and dismounted maneuvers, pyrotechnics and artillery simulation devices, constructing defensive positions, emplacing obstacles, establishing support areas or field hospitals, engaging in conflict scenarios and conducting after-action review, inspection, and cleanup.

Vehicles are moved on hardened and improved all-weather roads, with limited use of unimproved trails. On O'ahu, vehicle traffic is restricted to established roads and trails, except for the MPRC in SBW and the vehicle-accessible landing zones.

Force-on-force training is essentially a combination of maneuver training, reconnaissance training, and assembly area training. Ground disturbance from force-on-force training would be a combination of the individual training actions described previously.

Force-on-force training actions are routinely conducted at SBMR, KTA, DMR, and along the ORT. Force-on-force training may include maneuver live-fire training as discussed in Section 2.1.10.3.

Appendix A – Descriptions of Routine Military Training and Related Activities

2.1.6 Aviation Training

Aviation training involves operating and maintaining aircraft, and consists of two parts: aircrew training and maneuver training. Aircrew training involves learning and development of standard flight skills including takeoff and landings, flying techniques, flight operations, and navigation.

Aviation maneuver training involves the use of aircraft to transport ground units, including troops, vehicles, and equipment. Aviation training involves a variety of fixed-wing and rotary aircraft, and unmanned aerial vehicles from all branches of the armed forces, including the Marine Corps V-22 Osprey tilt-rotor aircraft, as well as aircraft from state and local governments.

Aviation live-fire training is addressed separately from Aviation Training and is included under the Live-Fire Training, section 2.1.10.

Based on a national sound abatement program, flight patterns over noise-sensitive areas are set to 2000 feet above ground level.

Aviation training originates at WAAF and is routinely conducted at all O'ahu training areas and in the airspace over and around O'ahu.

2.1.7 Deployment Training

Deployment training teaches Soldiers how to prepare and move military units and supplies as part of a military action. Deployment training includes preparation and execution actions, as well as deployment readiness exercises that are designed to evaluate a unit's ability to deploy. Training actions range from testing the load plan of a specific vehicle to a full-scale deployment exercise designed to simulate movement to an overseas location. Deployment transportation consists of a combination of vehicles, sea transport vessels, and aircraft, depending on the type and location of the deployment training. As part of deployment training, vehicle convoys are used to move personnel and equipment on the ORT as well as public roads between installations.

Deployment training occurs at SBMR, WAAF, and DMR.

2.1.8 Combat Engineer Training

Combat engineer training is routinely conducted as an independent action in designated engineer training areas, as well as a combined aspect of other training actions such as setting up assembly areas and clearing obstacles for maneuvers. Combat engineer training in the designated areas involves operating and maintaining heavy equipment and practicing earthmoving skills. Combat engineers also use explosives, but this type of training is addressed under section 2.1.10.

Designated combat engineer training areas on O'ahu are located in SBMR and KTA. When conducted as a combined aspect of other training action, combat engineer training occurs at all training areas on O'ahu.

Appendix A – Descriptions of Routine Military Training and Related Activities**2.1.9 Landing Zone, and Drop Zone Training**

Landing zones (LZs), and drop zones (DZs) are specific locations within the training areas that are used for a variety of training actions.

LZs are used for aircrew training, staging and extracting infantry units on air assault maneuvers, and to train CS and CSS units in support operations. Primary users of LZs are Army and Marine Corps units, Army civilian staff, and contractors. Some LZs are accessible by established roads and trails, and wheeled vehicles may be used in those areas. Other LZs are only accessible by air.

DZs are used for parachute drops of troops and equipment, primarily by Army, Marine Corps, Air Force, Special Operations forces, and Army National Guard units. Vehicles may be used at DZs to recover equipment and personnel. LZ and DZ Training occurs at WAAF, DMR, SBMR, KTA and K1B.

2.1.10 Live-Fire Training

Training conducted with explosives, live ordnance, or ammunition that fires projectiles is considered live-fire training, including short range training ammunition (SRTA) and paint-marking ammunition (“Simunition”). Each Soldier and weapon system crew has an assigned annual or semiannual live-fire training and qualification requirement.

Live-fire training entails an individual gunner, a weapon system crew, or a collective unit firing at predetermined targets within a designated firing range or training facility. Live-fire training on O’ahu involves a variety of munitions, including bullets, rockets, missiles, mines, grenades, explosives, artillery, mortars, and training ammunition.

All live-fire training takes place on specific training ranges established for each type of weapon. All weapons are fired from a firing position into an impact area. Firing positions may either be specific static points, or designated zones, based on the training event and the type of weapon. The impact area is the location within which projectiles are intended to land. Areas where explosive and incendiary ammunition has been fired in the past, and where unexploded ordnance is still present, is considered a “duded impact area.” Explosive and incendiary ammunition is currently fired into the designated “high-hazard impact area,” which is intended to limit the future extent of unexploded ordnance.

Live-fire training on O’ahu is routinely conducted at designated training ranges, firing points, and impact areas within SBMR, the Combined Arms Collective Training Facility (CACTF) at KTA and the SRTA training ranges at SBE.

2.1.10.1 Small Arms Training

Small arms are small-caliber, portable munitions including handguns, shotguns, light machine guns, rifles, and carbines designed for individual use. Basic small arms training and marksmanship qualification occurs at designated static firing ranges in SBMR using standard or training ammunition. Advanced small arms training, including close-quarters combat, occurs

Appendix A – Descriptions of Routine Military Training and Related Activities

within specially designed facilities and ranges such as the CACTF at KTA and the Military Operations in Urban Terrain (MOUT) training facility at SBS and the SRTA ranges in SBE. Small arms training at these facilities employs various types of training ammunition to limit damage and injury.

2.1.10.2 Weapons System Training

Weapons systems are either individual or crew-served munitions using larger caliber, incendiary or high-explosive ammunition. Weapons systems may be portable or vehicle-mounted, and include heavy machine guns, rocket launchers, shoulder-fired missiles, hand grenades, grenade launchers, mortars, and howitzers. Weapons system training is conducted on large training ranges designed for each weapon. Weapons are fired from firing positions at identified targets in the impact areas approved for each specific type of munition. High-explosive and incendiary ammunition is only fired into the high-hazard impact area because it has the potential to leave unexploded ordnance in the target zone. Live-fire weapons system training occurs in designated areas of SBW and SBS.

2.1.10.3 Maneuver Live-Fire Training

Maneuver live-fire training involves troops, vehicles and aircrafts firing small arms or weapons-system while moving. Requirements for maneuver live-fire training vary depending on individual and unit mission, weapons assigned, and ammunition selected. During live-fire maneuver training weapons may be fired at designated targets from within specific firing zones rather than fixed firing points. Maneuver live-fire training may also be a component of force-on-force training events. Maneuver live-fire training occurs in the MOUT facility at SBS, the CACTF at KTA and on the MPRC in SBW.

2.1.10.4 Demolition and Mine Training

Demolition training entails the use of explosive material, which is often used to remove obstacles, clear hazardous areas, or eliminate unexploded ordnance (explosive ordnance disposal is treated separately in section 2.2.2.). Mine training allows soldiers to become proficient in the use and removal of anti-personnel or anti-tank land mines. Demolition and mine training occurs at small designated training locations in SBW and SBS.

2.1.10.5 Aviation Live-Fire Training

Aviation live-fire training is conducted on designated ranges with aircraft firing at designated ground targets with guns, rockets, missiles, or bombs. Live-fire on O'ahu is limited to rotary aircraft, such as the AH-64 Apache, conducting high-angle fire with guns and rockets in order to decrease the ammunition range and minimize the beaten zone. Aviation live-fire occurs in the impact area at SBW.

2.2 Related Actions

Actions directly related to military training are discussed in detail below and include the following categories:

- Training Area Configuration, Maintenance, and Repair

Appendix A – Descriptions of Routine Military Training and Related Activities

- Explosive Ordnance Disposal
- Environmental Management (natural resources, cultural resources and wildland fire)

2.2.1 Training Area Configuration, Maintenance, and Repair

Training areas and infrastructure must be regularly configured, maintained, and repaired to keep areas functional for training, ensure safety, and prevent resource damage. Related actions include road and trail maintenance and repair; maintaining and repairing LZs, and DZs; grass cutting and other vegetation management; erosion prevention and management; utility and facility repair and maintenance; target placement, configuration, and repair; impact area berm construction and maintenance; firing point construction and maintenance; range cleanup, waste management, and pollution prevention.

Configuration, maintenance, and repair does not include construction of new range facilities and infrastructure or expansion of existing range facilities and infrastructure beyond their current footprint.

A variety of Army organizations are responsible for maintaining and repairing training areas, ranges, roads, targets, utilities, and other infrastructure. These organizations include Integrated Training Area Management (ITAM), the Directorate of Public Works (DPW), Range Maintenance, Range Control, Training Support Systems, and Division Engineering. These organizations also provide education on environmental stewardship responsibilities and have compliance and control programs to prevent resource damage, environmental degradation, and unauthorized or inappropriate use of the training areas.

2.2.2 Explosive Ordnance Disposal

Explosive Ordnance Disposal (EOD) is a critical component of training area use and management. High-explosive and incendiary ammunition (explosive ordnance), is currently used in limited locations during some live-fire training actions at SBW and SBS. In the past, explosive ordnance was more widely used and less tightly regulated than it is today. This type of ammunition has the potential to malfunction and may fail to detonate after firing. In this case, the fired munition is referred to as an unexploded ordnance (UXO) or a “dud”. Duds are dangerous and pose a safety hazard because they could explode at any time. EOD staff uses various methods, including explosives, to disarm or destroy UXO. When UXO is identified in active training areas and other places where it may pose a hazard, it is considered imminent danger to life and property and must be safely disposed of as soon as possible. The preferred course of action is to disarm it, remove it, and destroy it in a controlled environment. If UXO poses a hazard and cannot be safely removed, it must be destroyed in place. EOD activity is most frequently conducted within training ranges at SBW and SBS but the extent of explosive ordnance use in the past is not fully known and there is a potential to encounter UXO within any training area.

Appendix A – Descriptions of Routine Military Training and Related Activities**2.2.3 Environmental Management**

Environmental management associated with training areas consists of three parts: cultural resources, natural resources and prescribed fires. The DPW is the Army organization responsible for cultural and natural resources management and compliance in training areas. Range Division Hawaii (RDH) and the USAG-HI Wildland Fire Management Program have the primary responsibility for designing, approving, and conducting prescribed fires.

2.2.3.1 Cultural Resources Management

Cultural resources management involves identification, documentation, evaluation and treatment of historic-period and traditional Hawaiian resources. Army Regulation 200-1 considers cultural resources to be “historic properties as defined by the National Historic Preservation Act (NHPA); cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA); archaeological resources as defined by the Archaeological Resources Protection Act (ARPA); and sacred sites as defined by Executive Order (EO) 13007.” Routine cultural resources management often involves surveys and shovel tests to locate cultural resources, evaluative testing and sampling to aid in the determining the integrity and significance of a cultural resource; installing barriers, fences, markers and other protective measures around cultural resources; and monitoring cultural resources for potential impacts from training, training-related activity, and other causes.

2.2.3.2 Natural Resources Management

Natural resources management plays a crucial role in the Army’s ability to conduct training missions; each has the potential to impact the other. Training actions may cause the deterioration of habitat for protected plant and animal species, spread noxious weeds, or cause wildfires. The Army must comply with the Endangered Species Act and conduct training and training area management in a manner that does not harm federally listed species and critical habitat. Potential environmental impacts are identified in consultation with the U.S. Fish and Wildlife Service (FWS). Appropriate conservation measures are implemented through the Biological Opinion (BO) issued by the FWS. The Army’s Integrated Natural Resources Management plans describe the management actions necessary to comply with the BO. Environmental conservation and management measures may include conducting species inventory, monitoring species populations, protecting sensitive species through fencing and other control measures, eradicating noxious weeds or invasive species using herbicide and/or manual removal, installing signs and markers, and replanting native plant species.

2.2.3.3 Prescribed Fires

The greatest threat to health, safety, and the environment in and around training areas is uncontrolled wildland fire. The Army works cooperatively with many agencies to prevent uncontrolled wildland fires. This is accomplished through strict training policies, vegetation management, and regular prescribed fires. Regular, low-intensity prescribed fires prevent catastrophic wildfires by reducing available fuels, such as dried grasses, in a planned and controlled manner. Prescribed fires also help to maintain the suitability of training areas by preventing overgrowth, maintaining usable space, and reducing the potential to start wildfires.

Appendix A – Descriptions of Routine Military Training and Related Activities

during training actions. Prescribed fires are routinely conducted within the existing fire break on Schofield Barracks West Range at least twice per year.

3. Army Training Areas

This document address six training areas on the island of O‘ahu (figure 1).

3.1 Island of O‘ahu

The five training areas on the Island of O‘ahu that will be included in the PA are:

- Schofield Barracks Military Reservation
- Dillingham Military Reservation
- Kahuku Training Area
- Wheeler Army Airfield
- Kawaihoa Training Area K1B
- O‘ahu Roads and Trails System

3.1.1 Schofield Barracks Military Reservation (SBMR)

Schofield Barracks Military Reservation is centered on the Leilehua Plateau and stretches between the Ko‘olau Range on the east to the Wai‘anae Range on the west (Figure 2). SBMR includes four sub-installations: East Range, West Range, South Range and the Cantonment.

3.1.1.1 Schofield Barracks Cantonment (SBC)

Schofield Barracks Cantonment is the located in the center of SBMR (Figures 3 & 4). The SBC area has been subject to significant development and modification since the early 20th century and is now a small city that supports a population of over 60,000 military, civilians, retirees and family members. It is home to the 25th Infantry Division and other military units, as well as the offices and facilities of the Garrison directorates, such as the Directorate of Public Works. Most soldiers who conduct training on O‘ahu live in SBC, and most training actions begin and end at SBC. Routine military training actions conducted in the open spaces within SBC include:

- Physical Readiness Training
- Assembly Area Operations Training
- Deployment Training

The Cantonment is located on a flat plain near the center of the Leilehua Plateau and covers approximately 2449 acres. The entirety of SBC has been subject to repeated episodes of construction, demolition, filling, and grading and it is now an urban center comprised of administrative, residential, industrial and commercial buildings with a dense network or roads and utilities. The remaining open areas on SBC that are not paved have been landscaped with

Appendix A – Descriptions of Routine Military Training and Related Activities

lawns, shrubbery, and trees. The gulches in SBC are now overgrown with dense vegetation but even those areas were cleared, heavily modified and used during the mid-20th century. Soil in the SBC is comprised of silty clay and sediment is primarily construction and landscaping fill.

3.1.1.2 Schofield Barracks East Range (SBE)

Schofield Barracks East Range is a 4987-acre area east of Wheeler Army Airfield and SBC, and south of the town of Wahiawa (Figures 5 & 6). It extends east from the Leilehua Plateau to the top of the Ko'olau Range. Most types of training are conducted in SBE, but it is primarily used for reconnaissance training, assembly area training and combat engineer training, and maneuver training, including mounted maneuvers, dismounted maneuvers, and waterborne maneuvers in Kaukonahua Stream. Limited live-fire training is conducted with short-range training ammunition (SRTA) at two designated SRTA firing ranges. SBE is the location of the Lightning Academy, the JOTC, designated engineer training areas, and a confidence obstacle course. Training actions conducted in SBE include:

- Physical Readiness Training
- Maneuver Training
- Reconnaissance Training
- Assembly Area Operations Training
- Force-on-Force Training
- Aviation Training
- Combat Engineer Training
- LZ & DZ Training
- Live-fire Training

The western half of SBE is characterized by multiple flat-topped ridges and steep-sided stream channels. It has been heavily modified by agricultural and military use beginning in the early 20th century, and encompasses the locations of the defunct Ku Tree and Ko'olau dams and reservoirs. Soils and sediments in the western portion of SBE consist of a variety of silty clays and clay loams. The eastern half of SBE consists of narrow ridges and very steep ravines. The very rugged terrain of the eastern half has not been significantly modified. Soils and sediments in the rough mountains land of the eastern portion consist of clays along the ridges and silty clay in the ravines. Most of SBE is heavily forested with a variety of invasive and native species. Stands of thick grass cover some of the flat-topped ridges in the western portion. Many of those ridges are regularly mowed to ensure the area is available for training.

3.1.1.3 Schofield Barracks West Range (SBW)

SBW encompasses 5840 acres on the west side of SBC and extends west to the crest of the Wai'anāe Range (Figures 7 & 8). SBW is the oldest training range on O'ahu, having been used for artillery and small arms training since the early 20th century. SBW is the primary live-fire training area on O'ahu and contains multiple small-arms ranges, artillery firing points and areas, and explosives training areas. Most of SBW is a dudded impact area that was historically targeted by artillery, mortars, and other high-explosive munitions and unexploded ordnance may found throughout the area. Two active impact areas are present on SBW: the targeted impact

Appendix A – Descriptions of Routine Military Training and Related Activities

area and the targeted high-hazard impact. The targeted impact area covers about half of SBW and is the location where inert or non-explosive ordnance may land. The targeted high-hazard impact area is much smaller and is the only area into which high-explosive and flammable munitions are still fired. Both impact areas are located within the firebreak road. The area within the firebreak road is regularly burned to prevent catastrophic wild fires. Most of the area outside of the firebreak road is not used for training actions because of the steep slopes and the danger posed by historical targeting and old UXO. Similarly, most of the gulches in SBW are not used for training activity because of the UXO danger. SBW is the location of a multi-purpose range complex (MPRC), formerly the BAX, which can support up to company-sized mounted and dismounted maneuver training. Training actions conducted in SBW include:

- Physical Readiness Training
- Maneuver Training
- Reconnaissance Training
- Assembly Area Operations Training
- Force-on-Force Training
- Aviation Training
- Combat Engineer Training
- LZ Training
- Live-fire Training

SBW is located in semi-circular valley on the east side of the Wai'anae Range. It is characterized by wide and relatively flat ridges and narrow gulches. The land slopes gently down to the east onto the Leilehua Plateau from the steep flanks of the steep Wai'anae Range. Soil in SBW is primarily composed of silty clay and clay loam with rocky basalt sediment on the upper slopes. Construction and landscaping fill was used to create berms and construct the firing ranges along the flats at the eastern edge of SBW. The upper portion and the gulches of SBW are forested while the flats on the lower portion are covered with thick grass that must be mowed frequently to sustain training uses. Biannual controlled burns are conducted within the firebreak to reduce vegetation and minimize the danger from catastrophic wildfires.

3.1.1.4 Schofield Barracks South Range (SBS)

SBS is a 1738-acre area located south of SBW (Figures 9 & 10). SBS contains landing zones, maneuver areas, artillery firing positions, and variety of training ranges including those for combat engineers, mines and explosives, firing ranges, and a MOUT area. Training actions in SBS include:

- Physical Readiness Training
- Maneuver Training
- Reconnaissance Training
- Force-on-Force Training
- Aviation Training
- Combat Engineer Training
- LZ Training

Appendix A – Descriptions of Routine Military Training and Related Activities

Appendix A – Descriptions of Routine Military Training and Related Activities

- Live-fire Training

The geographical and geological setting of SBS is the same as SBW, described above.

3.1.2 Dillingham Military Reservation (DMR)

DMR occupies a 645-acre area located on the northwest coast of O‘ahu and, for the purposes of the PA, also includes Mokulē‘ia Army Beach across from the airfield on the north side of Highway 99 (Figures 11 & 12). DMR is used primarily for aviation training, small-unit helicopter-supported maneuver training and assembly area operations training, but it also frequently used for combat engineer training, deployment training, and small scale force-on-force training.

Training actions conducted at DMR include:

- Maneuver Training
- Reconnaissance Training
- Assembly Area Operations Training
- Force-on-Force Training
- Aviation Training
- Deployment Training
- Combat Engineer Training
- LZ Training

DMR is located along portions of the shoreline and the coastal flats at the foot of the steep cliffs on the north side of the Wai‘anae Range. Sediment at DMR consists of beach sand and Jaucas sand in the northern half of the installation, and a variety of clay and silty clay soils in the southern half. More than one-third of the installation consists of fill deposited when the airfield was constructed and improved in the first part of the 20th century. Thick stands of invasive vegetation now cover the southern half of DMR, an area that was once cleared for military aviation operations and equipment storage. All associated facilities including the control tower and aircraft hangars are currently leased to the State of Hawaii, Department of Transportation, but the Army retains first priority for use. Digging or excavation in Jaucas sand is not permitted as part of routine military training and related activity. Any digging or excavation proposed at Mokulē‘ia Army Beach or other locations with Jaucas sands will require project-specific Section 106 consultation.

3.1.3 Kahuku Training Area (KTA)

KTA is 9098-acre area located in northeast O‘ahu at the northern end of the Ko‘olau Range (Figures 13 & 14). KTA is the primary maneuver area for both mounted and dismounted maneuvers on O‘ahu. Live-fire training at KTA is restricted to the CACTF and MOUT facility. Training actions in KTA include:

- Maneuver Training

Appendix A – Descriptions of Routine Military Training and Related Activities

- Reconnaissance Training
- Assembly Area Operations Training
- Force-on-Force Training
- Aviation Training
- Deployment Training
- Combat Engineer Training
- LZ & DZ Training
- Live-fire Training

KTA occupies the upland areas on the northern end of the Ko'olau Range at the northern point of O'ahu. The land is dissected by numerous steep ridges and valleys and is heavily forested. Much of the KTA is rough mountainous land. Soils and sediment in KTA include dominated by a variety of clays, silty clays, and rocky areas with abundant basalt boulders. Two parcels of KTA are leased from the State of Hawaii until the year 2029 with non-exclusive use rights. One parcel is the Pūpūkea-Paumalu Forest Reserve, the other is used by the Kahuku Motocross Association on weekends and holidays. Both of those parcels are managed by the State Division of Forestry and Wildlife.

3.1.4 Wheeler Army Airfield (WAAF)

WAAF is the home of the Combat Aviation Brigade (CAB) and is the origin of all aviation training on O'ahu (Figures 15 & 16). Five types of training actions are routinely conducted at WAAF:

- Physical Readiness Training
- Maneuver Training
- Aviation Training
- LZ & DZ Training
- Deployment Training
- Assembly Area Operations Training

WAAF covers a 1588-acre area in central O'ahu, atop the Leilehua Plateau and in the adjacent Wheeler Gulch. The northern and eastern portion of the airfield, including the location of the runways and facilities, is very flat and level, while the southern and western portion is dissected by steep, forested gulches. Much of the installation was modified by construction in the 20th century. Soils and sediment in WAAF consist of silty clays and construction fill.

3.1.5 Kawaihoa Training Area K1B

On the western flank of the Ko'olau Mountain Range is a large tract of dense jungle that is often referred to as Kawaihoa Training Area. The southern portion of that tract, immediately the north of SBE, is a 4300-acre area known as K1B (Figures 17 & 18). The Kawaihoa Training Area is not owned by the U.S. Army. Most of the area is leased from Kamehameha Schools to conduct aviation training, and the current month-to-month lease only allows “touch-and-go” landings at

Appendix A – Descriptions of Routine Military Training and Related Activities

designated landing zones. Because of the limited training capability and the short-term nature of the lease, the vast majority of Kawaihoa Training Area is not included in this PA. However, the K1B area is leased from the State of Hawaii until the year 2029 for a variety of training actions and the area will be included in the training PA. The lease allows for all types of training, including live-fire up to .50 caliber, but only four types of training are routinely conducted:

- Reconnaissance Training
- Maneuver Training (dismounted)
- Aviation Training
- LZ Training

The remote nature of the parcel and the extremely limited vehicle access preclude other types of training actions. Much like the eastern half of SBE, K1B consists of narrow ridges separated by very steep ravines. The northwest corner of K1B was altered by commercial agriculture in the 20th century, and there are seven landing zones in that part of the area, but otherwise the very rugged terrain of K1B has not been significantly modified. Soils and sediments in the rough mountains land of the K1B consist of erosive clays along the ridges and eroded silty clay in the ravines. The area is drained by two perennial water courses: the North Fork of Kaukonahua Stream and the Poamoho Stream. K1B lies within the 'Ewa forest reserve, managed by the State of Hawaii Division of Forestry and Wildlife.

3.1.6 O'ahu Roads and Trails System (ORT)

While not technically a training area like the others, the ORT is an integral part of Army training on O'ahu. The ORT consists of the non-public military transportation corridors within and between training areas. The ORT is located on a combination of Army property and Army easements. The primary ORT routes between training areas are Drum Road, Pa'ala'a Uka-Pūpūkea Road and Poamoho Road, which link SBMR with KTA. Routine training actions along the ORT between training areas include:

- Maneuver Training
- Reconnaissance Training

The ORT consists of paved or improved gravel roads, usually located atop road construction fill.

Appendix A – Descriptions of Routine Military Training and Related Activities

3.2 Training Area Activity Matrix

Training Area: Training Type	DMR	WAAF	KTA	SBC	SBE	SBW	SBS	K1B
Physical Readiness		X		X	X	X	X	
Maneuver	X	X	X		X	X	X	X
Reconnaissance	X		X		X	X	X	X
Assembly Area	X	X	X	X	X	X	X	
Force-on-Force	X		X		X	X	X	
Aviation	X	X	X		X	X	X	X
Deployment	X	X	X	X				
Combat Engineer	X		X		X	X	X	
LZ, DZ	X	X	X		X	X	X	X
Live-Fire			X		X	X	X	

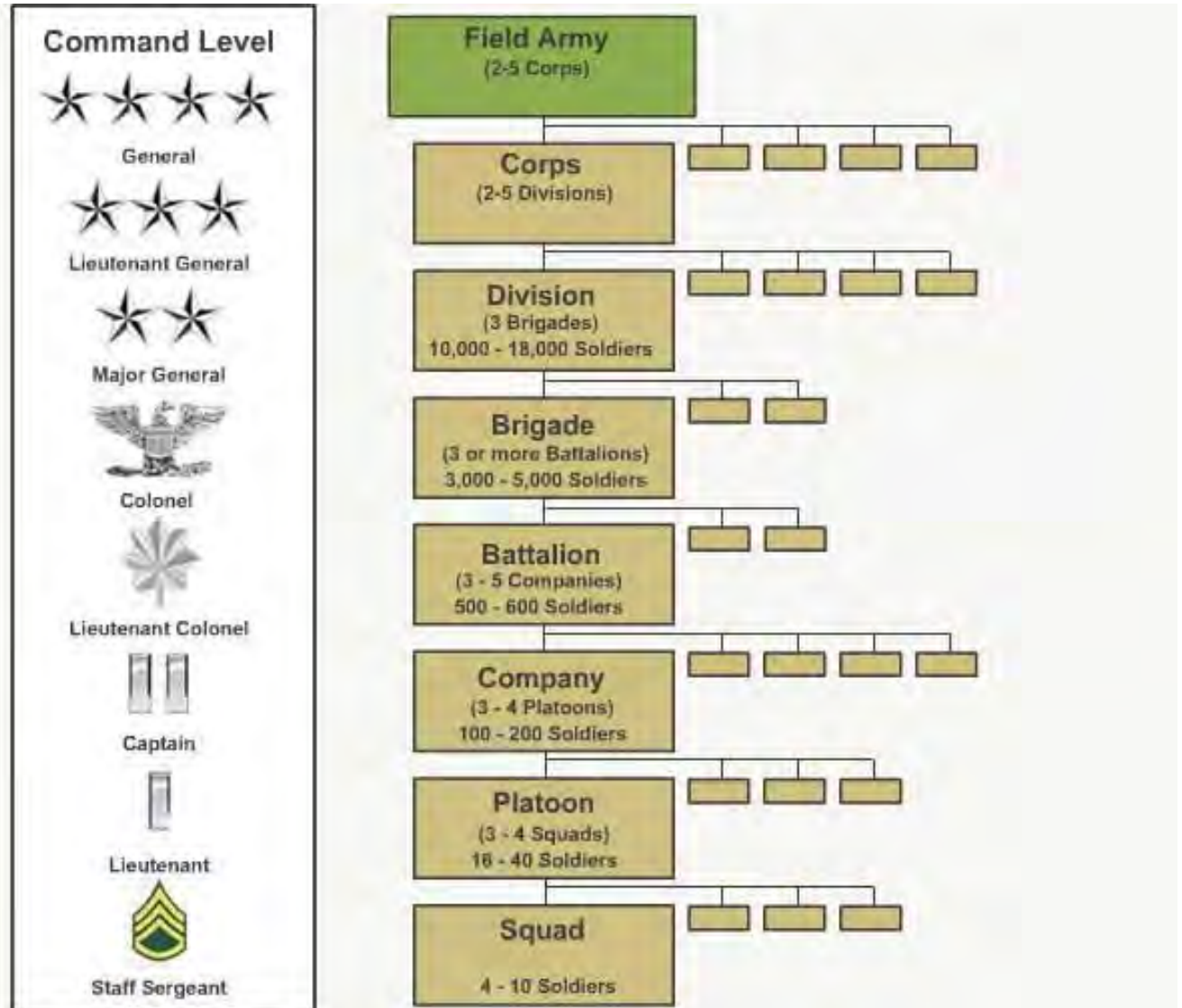
Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities

4. References

4.1 Army Unit Organization Chart



Appendix A – Descriptions of Routine Military Training and Related Activities

4.2 Acronyms

ACHP: Advisory Council on Historic Preservation

ARPA: Archaeological Resources Protection Act

BAX: Battle Area Complex

BO: Biological Opinion

CAB: Combat Aviation Brigade

CACTF: Combined Arms Collective Training Facility

CS: Combat Support

CSS: Combat Service Support

DPW: Directorate of Public Works

DZ: Drop Zone

DMR: Dillingham Military Reservation

DPW: Directorate of Public Works

EDRE: Emergency Deployment Readiness Exercise

EO: Executive Order

EOD: Explosive Ordnance Disposal

FWS: U.S. Fish and Wildlife Service

IPBC: Infantry Platoon Battle Course

HMMWV: High Mobility Multipurpose Wheeled Vehicle (Humvee)

ITAM: Integrated Training Area Management

JOTC: Jungle Operations Training Center

K1B: Kawaihoa 1B Training Area

KTA: Kahuku Training Area

LZ: Landing Zone

MOUT: Military Operations in Urban Terrain

MPRC: Multi-Purpose Range Complex

NAGPRA: Native American Protection and Repatriation Act

NCO: Noncommissioned Officer

NHO (NHOs): Native Hawaiian Organization(s)

NHPA: National Historic Preservation Act

ORT: O'ahu Roads and Trails system

PA: Programmatic Agreement

PRT: Physical Readiness Training

RDH: Range Division Hawaii

SBC: Schofield Barracks Cantonment

SBMR: Schofield Barracks Military Reservation

SBE: Schofield Barracks East Range

SBS: Schofield Barracks South Range

SBW: Schofield Barracks West Range

SHPO: State Historic Preservation Officer

SOP: Standard Operating Procedure

SRTA: Short-Range Training Ammunition

USAG-HI: United States Army Garrison, Hawai'i

UXO: Unexploded Ordnance

WAAF: Wheeler Army Airfield

Appendix A – Descriptions of Routine Military Training and Related Activities

4.3 Glossary

Air Assault – Movement of assault forces by helicopter to attack the enemy or capture land

Assault Forces – Soldiers assigned to combat, combat support, or combat service support roles

Artillery (Field Artillery) – Equipment, supplies, ammunition and personnel involved in the use of cannons, rockets or surface-to-surface missile launchers

Battalion – A military unit consisting of three to five companies, approximately 500-900 soldiers; see section 3.1

Battle Area Complex (BAX) – A large constructed battlefield training course designed for tactical maneuver and live-fire training at the company and battalion level

Beaten Zone – The area on the ground near a target where most ammunition lands

Blank Ammunition (Blanks) – A type of training ammunition that contains gunpowder but no bullet or shot. When blank ammunition is fired, it produces a sound and a flash

Bivouac – A temporary camp for military lodging during training or operations away from a cantonment or installation.

Brigade – A military unit consisting of three or more battalions, approximately 3000-5000 soldiers; see section 3.1

Cantonment – The main administrative and residential section of a large military training installation

Carbine – A short-barrel rifle, standard issue to U.S. Army soldiers

Combat Support (CS) – A military unit that provides operational support and assistance to combat units; Army CS units include Military Police, Military Intelligence, Signal Corps, Chemical Corps, Corps of Engineers, and Army Aviation

Combat Service Support (CSS) – A military unit that provide logistical support and assistance to combat units; CSS units provide transportation, maintenance, supply, subsistence, and health services to combat units and soldiers

Combat Unit – A military unit organized, trained, and equipped to engage in combat

Company – A military unit consisting of three to four platoons, approximately 100-200 soldiers; see section 3.1

Confidence Course – An obstacle course used during physical training

Crew-served Weapon – Munitions that must be operated by two or more soldiers

Appendix A – Descriptions of Routine Military Training and Related Activities

Defensive Fighting Position – A location used by assault forces to protect against the enemy; may be a simple concealed position, a hand-dug hole, or a machine-excavated emplacement; see *Individual Fighting Position*

Deployment (operational deployment) – Moving military forces into and out of an operational area

Division – A military unit consisting of three brigades, approximately 10,000 – 18,000 soldiers; see section 3.1

Drop Zone – The geographic area where troops, equipment, and supplies are dropped by parachute

Dud – Explosive ordnance that fails to explode; unexploded ordnance

Dud-producing – Any type of explosive ordnance that has the potential to fail

Dudded Impact Area – An area where explosive ordnance has previously been fired and where unexploded ordnance (UXO) may be present

Excavation – Digging with mechanical equipment during military training

Explosives – A substance that produces an explosion; may be incorporated into munitions or used in demolition to destroy structures and equipment, or clear areas

Explosive Ordnance – All munitions containing explosives

Firing Lane – The area within which an aircraft weapon is fired

Firing Point – The location from which a weapon is fired

Grenade – A small munition thrown by hand or fired from a launching device (grenade launcher); grenades may be explosive, incendiary, chemical, or smoke-producing

High-Angle Fire – Munitions delivered from above a target which minimizes the range of the ammunition; helicopters, mortars, and howitzers are capable of high-angle fire

High-Hazard Impact Area – The designated location into which explosive ordnance is currently fired and is expected to land, located within a larger impact area

High-Explosive Ammunition (HE) – Artillery and mortar fire that contains a substance designed to explode at the targets; explosive ordnance

HMMWV (Humvee) – High mobility multipurpose wheeled vehicle

Howitzer – A cannon that combines certain characteristics of both guns and mortars, and employs either low- or high-angle fire; the primary weapon of the Artillery Division

Impact Area – A designated location within a training area into which ordnance is fired and is expected to land

Incendiary Ammunition – Artillery and mortar fire designed to burn or start fires

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities

Indirect Fire – Firing on a target using geometric aiming rather than pointing the weapon directly at the target, as with artillery

Individual Fighting Positions – Hand-tool created locations for individuals or crew-served weapons; see *Defensive Position*

Infantry – Soldiers trained and equipped to fight on foot; the main land combat force and largest component of the Army

Infantry Platoon Battle Course (IPBC) – A constructed battlefield course, smaller than a Battle Area Complex, designed for tactical maneuvers and live-fire training at the platoon or squad level

Jaucas Sand – Very deep, well-drained sandy soil located along stabilized, vegetated coastal plains above the high tide line; soil type commonly associated with buried cultural material and human remains

Jungle Warfare Training – Military training designed to prepare soldiers for successful tactical operations in a jungle environment, including survival skills, land navigation, waterborne operations, rope-assisted movements, and jungle combat techniques; primary training actions are reconnaissance and dismounted maneuvers; conducted by the Jungle Operations Training Center (JOTC)

Logistical – Relating to planning and executing movement, maintenance, and communication of military forces. Military operations associated with acquiring, designing, developing, constructing, operating, maintaining, storing, supplying, distributing, and moving military personnel and equipment and providing related services

Landing Zone (LZ) – Specified area for landing helicopters to load and/or unload troops and cargo; landing zones may have more than one designated landing sites; also called HLZ (helicopter landing zone)

Large Caliber – A firearm with a barrel diameter of one-half inch (12.7 millimeters) or more; examples include the .50 caliber heavy machine gun, the 40mm mortar, and the 155mm howitzer

Live-fire – Training conducted with explosives, incendiary ordnance, or ammunition that fires a bullet or other projectile as opposed to blank ammunition where nothing leaves the gun barrel

Machine Gun – A type of automatic portable or vehicle-mounted military weapon designed to fire ammunition in quick succession; light machine guns are small caliber weapons that are designed for the individual soldier, heavy machine guns are large caliber weapons and must be vehicle-mounted or crew-served

Maneuver – Tactical movement of assault forces to achieve an advantage over the enemy

Missile – Self-propelled, precision-guided projectile; fired from a vehicle-mounted or shoulder-fired missile launcher

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities

Mine (Landmine) – An explosive device planted in the ground; designed to destroy or damage vehicles or personnel when the target approaches or triggers the device

Mortar – A muzzle-loading indirect fire weapon with a high angle of fire

Multi-Purpose Range Complex (MPRC) – a live-fire training range designed to support combined arms live-fire exercises and advanced-gunnery qualifications. The MPRC supports multiple simultaneous training actions, including company-sized elements performing crew and collective gunnery tasks such as individual crew, section, and platoon qualifications, as well as mounted maneuver live-fire and aviation live-fire training.

Munitions – Military weapons and ammunition; ordnance

Non-dud-producing – Ordnance that is inert and contains no explosive or incendiary material and cannot result in a dud

Non-live-fire – Tactical combat training using blank ammunition

Operational – Relating to the mission, objectives, and tasks of the Army or other military operations

Ordnance – Military supplies, primarily weapons and ammunitions; munitions

Patrol – Monitoring an area by traveling around or through it, and engaging the enemy if present; a group of soldiers tasked with the same

Physical Readiness Training (PRT or PT) – A soldier's basic daily physical conditioning and training. May include the use of obstacles in a designated confidence course

Platoon – A military unit consisting of three to four squads, approximately 16 - 40 soldiers; see section 3.1

Pyrotechnics – Devices used to produce smoke, noise, or light, either for signaling or to simulate battlefield conditions and combat situations

Riot-Control Agents – volatile irritants such as tear gas or CS gas used during training actions to replicate battlefield conditions and combat situations

Rocket – Self-propelled unguided projectile; fired from a vehicle-mounted or shoulder-fired rocket launcher

Seibert Stakes – High-visibility markers used by the U.S. Army to identify areas that are off-limits for training activity

Shoulder-Fired – A type of weapon system for aiming and launching rocket or missile while it is held on one's shoulder

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities

Short Range Training Ammunition (SRTA) – A type of training ammunition that fits in standard small-arms weapons but fires a plastic polymer compound bullet designed to disintegrate on impact

Simunition – A type of training ammunition that fits in standard small-arms weapons but fires paint-marking projectiles instead of bullets

Small Caliber – A firearm with a barrel diameter of up to one-half inch (.50 caliber) or 12.7 millimeters; examples include the 5.56mm carbine and .30 caliber rifle

Small Arms – Small caliber, portable firearms designed for individual use; examples include handguns, shotguns, light machine guns, rifles, and carbines

Special Operations – Unconventional missions conducted by specialized units, often involving combined forces from multiple branches of the U.S. military

Squad – The basic military unit consisting of 4-10 soldiers; see section 3.1

Tactical – Relating to planned military actions or combat tactics

Targeted Impact Area – Area currently used for routine military live-fire training with inert ordnance; UXO from previous training may be present

Targeted High Hazard Impact Area – Area currently used for routine military live-fire training with high-explosive or incendiary ordnance; UXO is present

Tilt-rotor aircraft – A hybrid aircraft that can takeoff and land like a helicopter, then tilt its engines to fly like an airplane; the Marine Corps V-22 Osprey is the primary example

Touch-and-Go – A type of aviation training that involves quick landings and takeoffs without activity or extended time on the ground

Training Ammunition – Projectile ammunition used during training actions; includes paint-marking ammunition, short-range training ammunition (SRTA) with rubber or plastic bullets, and non-dud-producing large-caliber ordnance

Training Area – Large geographic area used by the U.S. Army to conduct military training actions; subdivided into training ranges

Training Range – Small geographic subdivision of a training area often designated for specific weapons qualifications or other types of training actions

Unexploded ordnance (UXO) – munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, personnel, or material, and remains unexploded either by malfunction, design, or any other cause

Unit – A military element or group such as a squad, platoon, or company; see section 3.1

Unmanned Aerial Vehicle – An aircraft flown without a pilot aboard; commonly known as a drone

Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix A – Descriptions of Routine Military Training and Related Activities











Weapons System – Individual or crew-served large caliber munitions, using standard, incendiary, or high-explosive ammunition, either portable or vehicle-mounted. Examples include heavy machine guns, rocket launchers, shoulder-fired missiles, hand grenades, grenade launchers, mortars, and howitzers

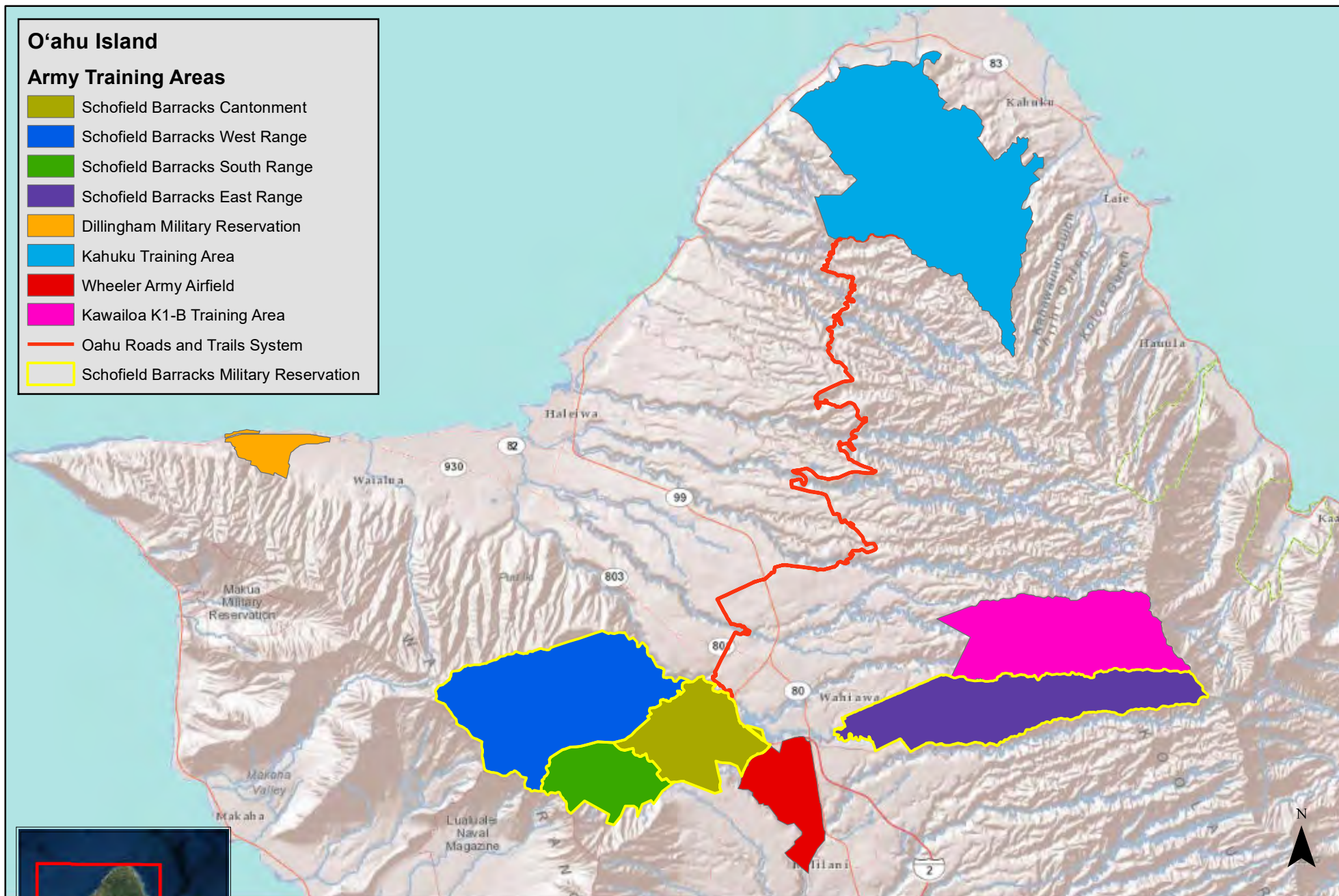
Appendix A – Descriptions of Routine Military Training and Related Activities

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

O'ahu Island

Army Training Areas

-  Schofield Barracks Cantonment
-  Schofield Barracks West Range
-  Schofield Barracks South Range
-  Schofield Barracks East Range
-  Dillingham Military Reservation
-  Kahuku Training Area
-  Wheeler Army Airfield
-  Kawaihoa K1-B Training Area
-  Oahu Roads and Trails System
-  Schofield Barracks Military Reservation



Kilometers 0 1 2 4 6 8 10

1:170,000


FIGURE 1
Army Training Areas on O'ahu Island
 Programmatic Agreement
 for Routine Military Training Actions and Related Activity

Produced by USAG-HI
 DPW-ENV, Cultural Resources

D. Crowley
 01-June-2017



O'ahu Island Army Training Areas

 Schofield Barracks Military Reservation (SBMR)

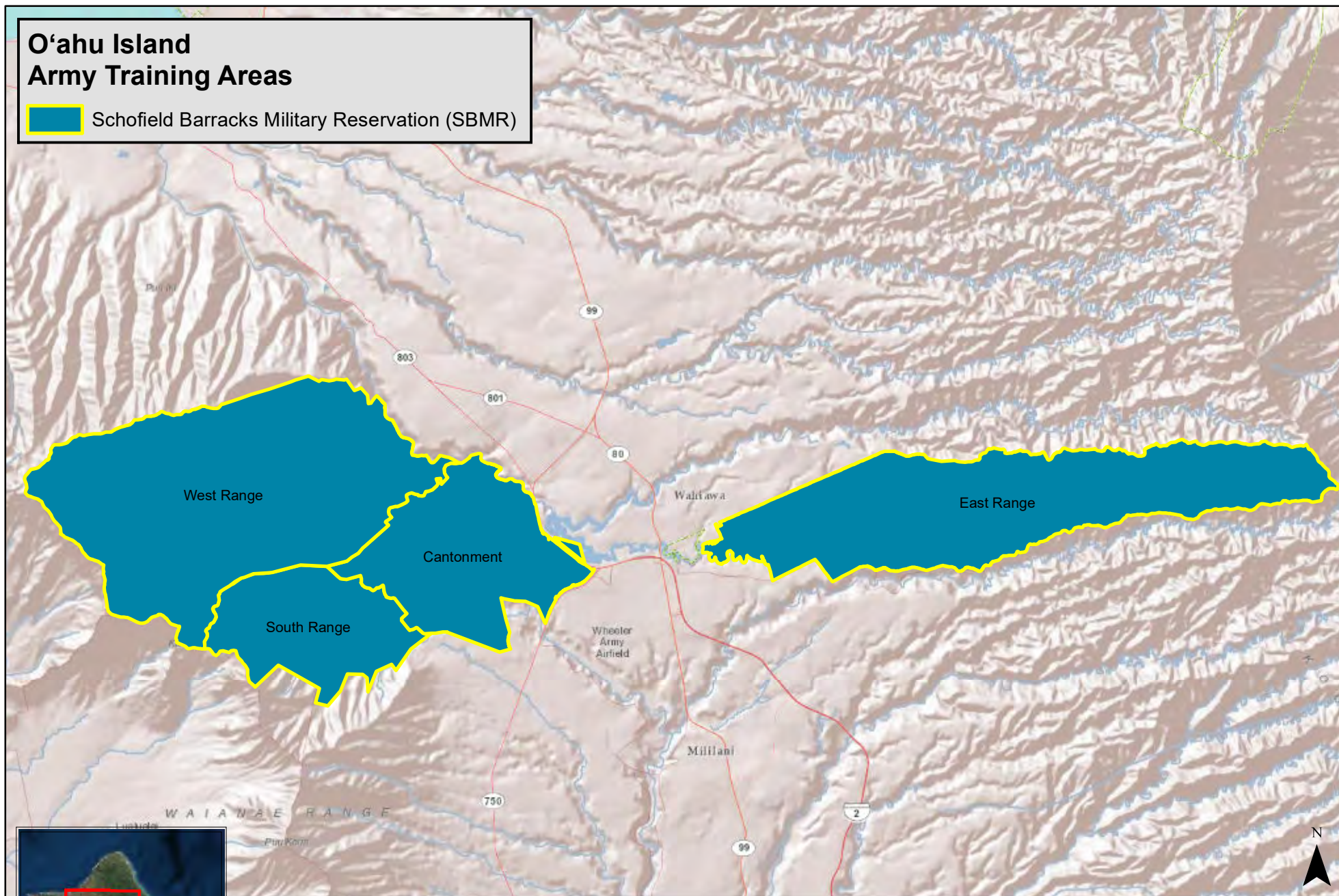


FIGURE 2
Schofield Barracks Military Reservation
O'ahu Island
Programmatic Agreement
for Routine Military Training Actions and Related Activity



Kilometers 0 0.5 1 2 3 4 5
1:100,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

Army Training Areas O'ahu Island Schofield Barracks Cantonment (SBC)

-  Schofield Barracks Cantonment
-  Oahu Roads and Trails System

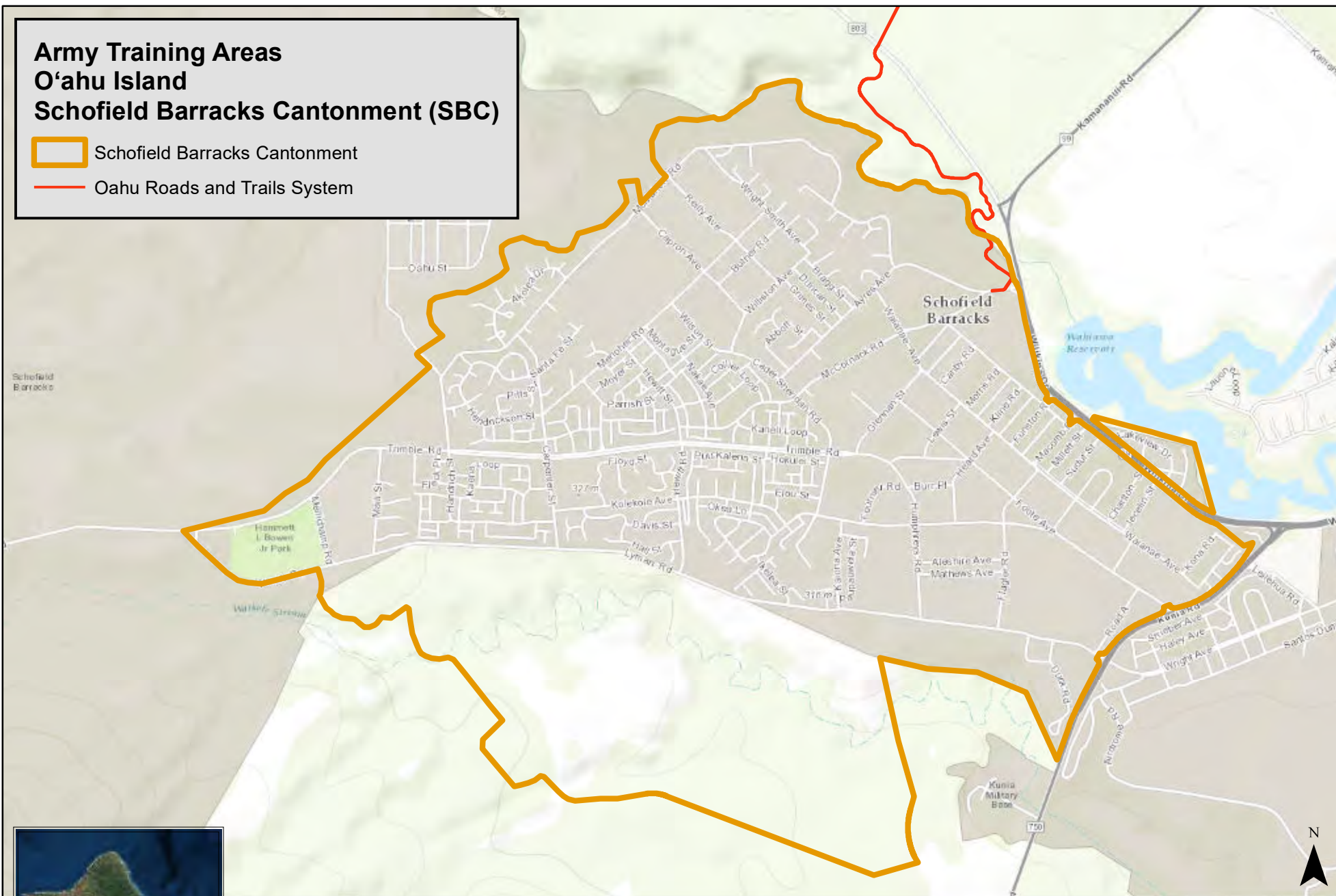


FIGURE 3
Topographic Map of Schofield Barracks Cantonment
O'ahu Island
 Programmatic Agreement
 Routine Military Training and Related Activity



Kilometers 0 0.25 0.5 0.75 1
 1:25,000

Produced by USAG-HI
 DPW-ENV, Cultural Resources

D. Crowley
 01-June-2017



**Army Training Areas
O'ahu Island
Schofield Barracks Cantonment (SBC)**

-  Schofield Barracks Cantonment
-  Oahu Roads and Trails System

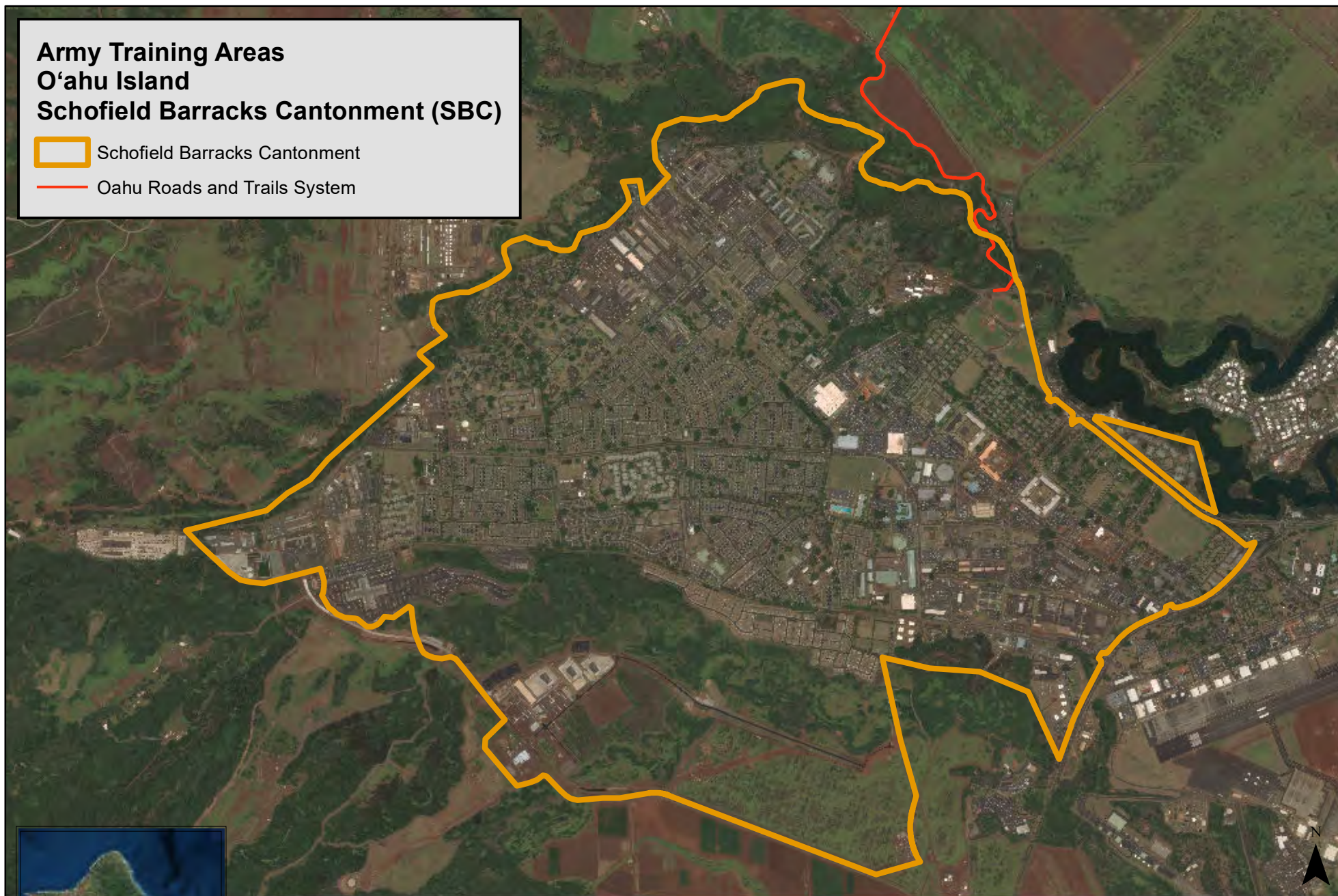


FIGURE 4
Orthophoto of Schofield Barracks Cantonment
O'ahu Island
Programmatic Agreement
for Routine Military Training and Related Activity



Kilometers 0 0.25 0.5 0.75 1
1:25,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

Army Training Areas O'ahu Island Schofield Barracks East Range (SBE)

-  Schofield Barracks East Range
-  SRTA Firing Ranges

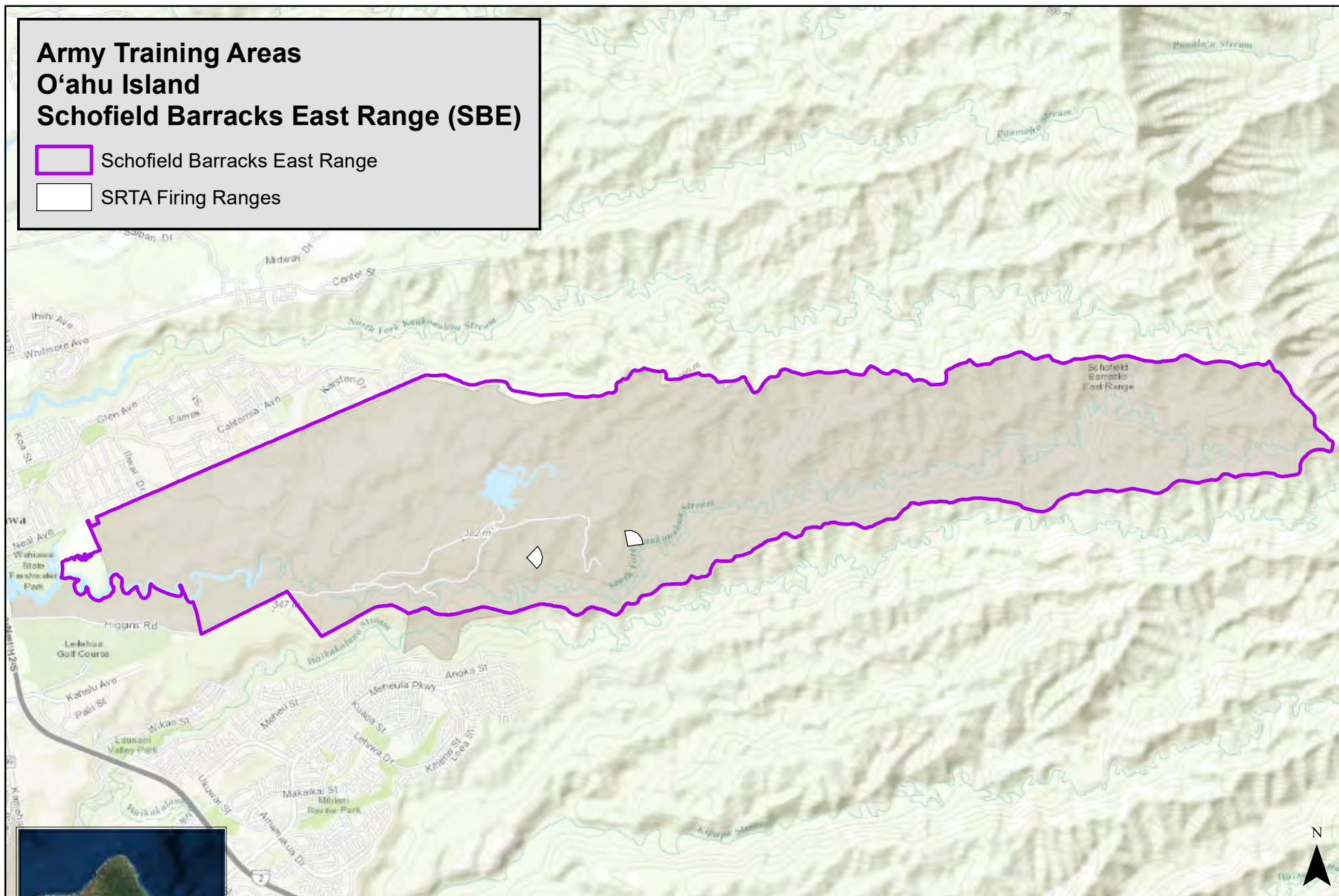


FIGURE 5
Topographic Map of Schofield Barracks East Range
O'ahu Island
 Programmatic Agreement
 Routine Military Training and Related Activity



Kilometers 0 0.75 1.5 2.25 3
 1:50,000



Produced by USAG-HI
 DPW-ENV, Cultural Resources

D. Crowley
 01-June-2017

**Army Training Areas
O'ahu Island
Schofield Barracks East Range (SBE)**

-  Schofield Barracks East Range
-  SRTA Firing Ranges

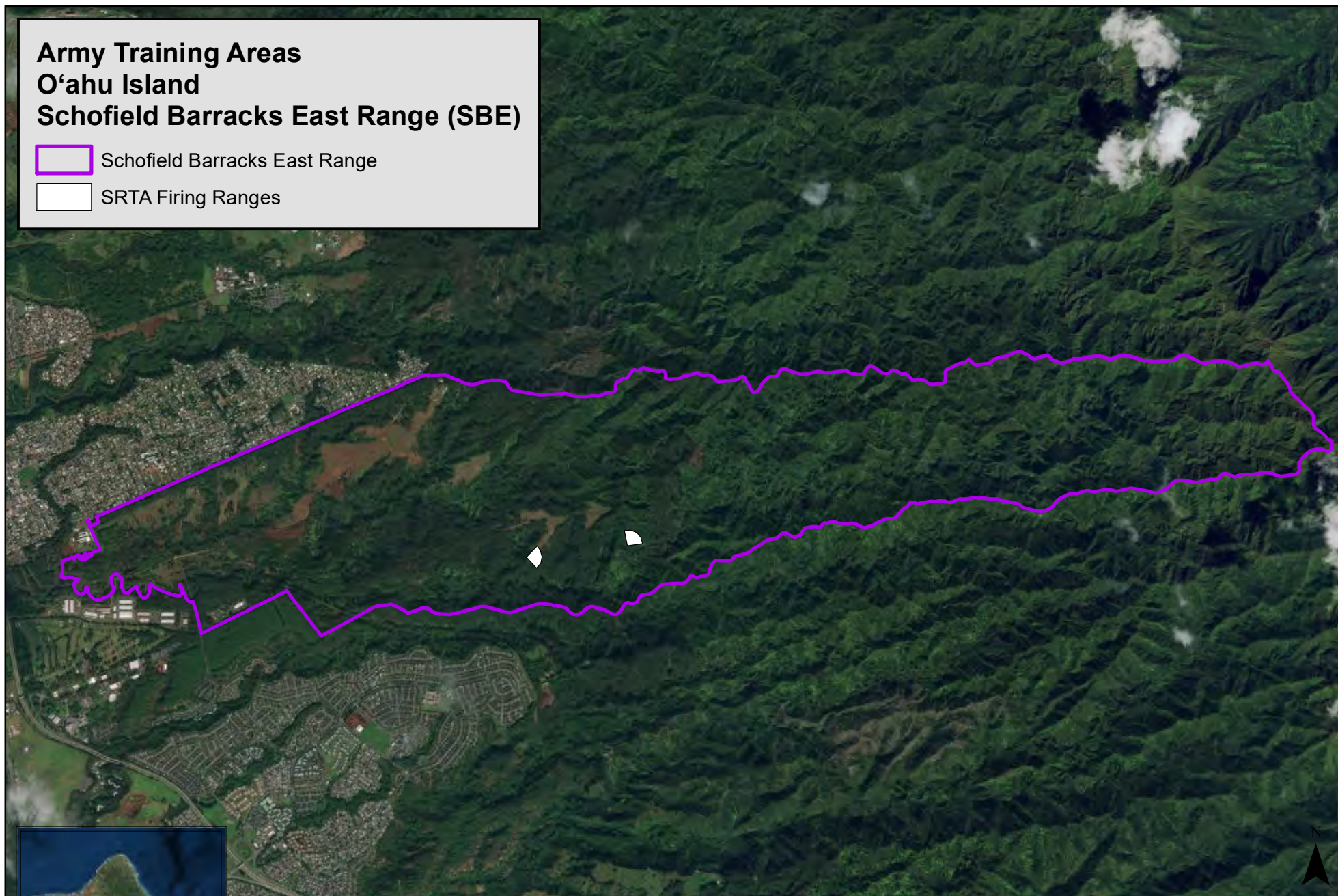


FIGURE 6
Orthophoto of Schofield Barracks East Range
O'ahu Island
Programmatic Agreement
Routine Military Training and Related Activity





Kilometers 0 0.75 1.5 2.25 3
1:50,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

Army Training Areas O'ahu Island Schofield Barracks West Range (SBW)

-  Schofield Barracks West Range
-  Targeted Impact Area
-  Targeted High Hazard Impact Area
-  Prescribed Fire Area

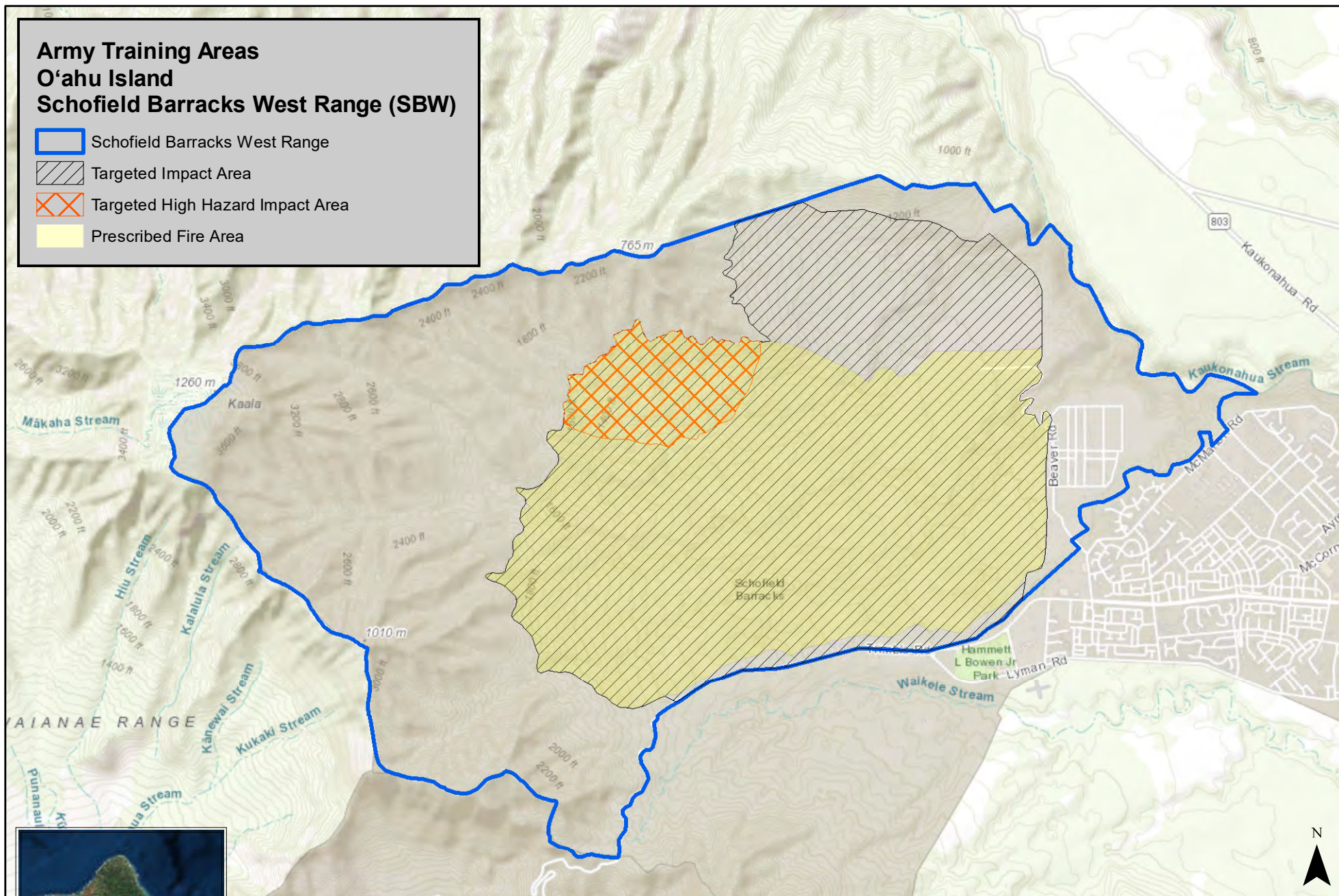






FIGURE 7
Map of Schofield Barracks West Range
on O'ahu Island
 Programmatic Agreement
 for Army Training Actions

Kilometers 0 0.5 1 1.5 2
 1:40,000



Produced by USAG-HI
 DPW-ENV, Cultural Resources
 D. Crowley
 01-March-2017

Army Training Areas O'ahu Island Schofield Barracks West Range (SBW)

-  Schofield Barracks West Range
-  Targeted Impact Area
-  Targeted High Hazard Impact Area
-  Prescribed Fire Area

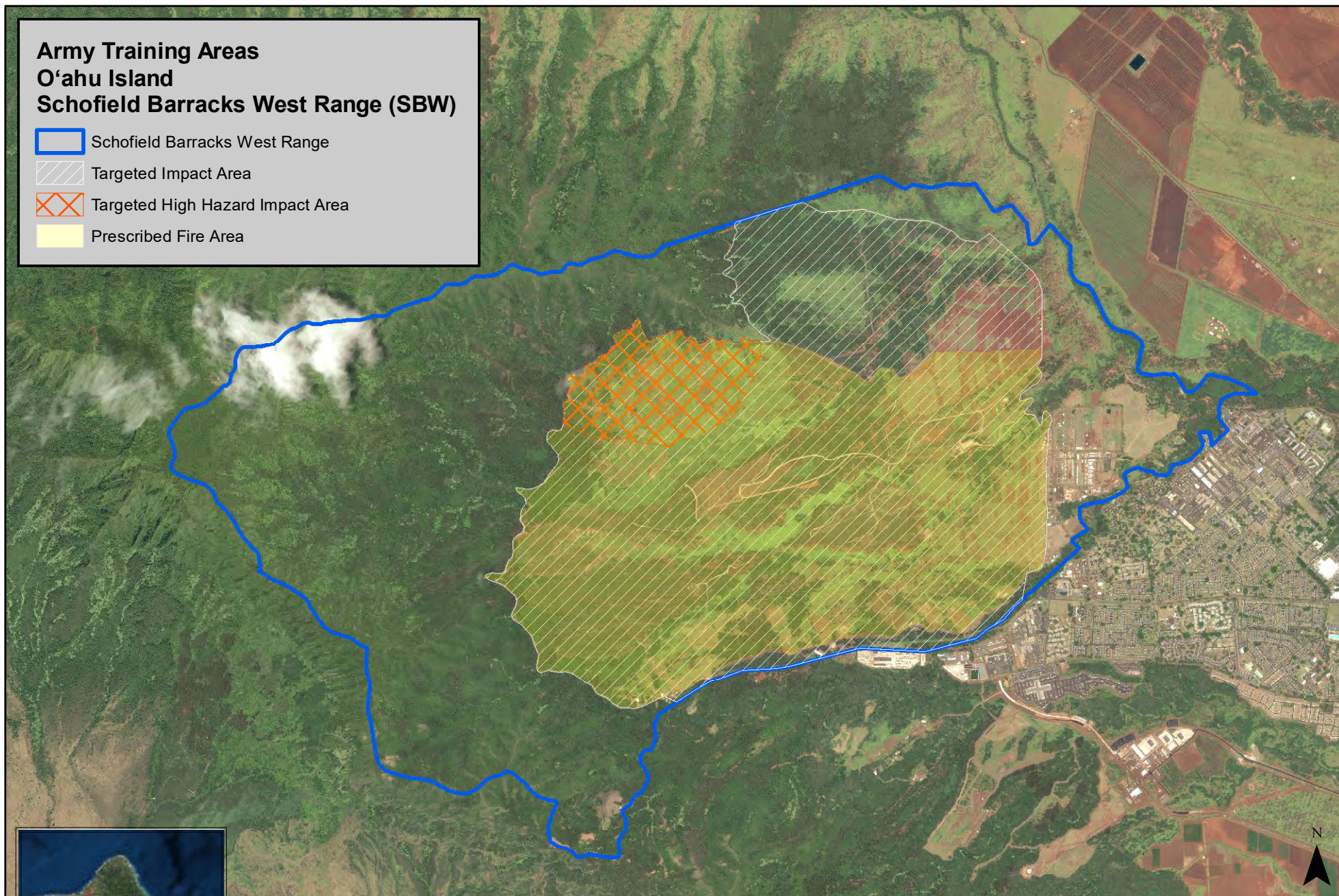


FIGURE 8
Orthophoto of Schofield Barracks West Range
on O'ahu Island
 Programmatic Agreement
 for Army Training Actions


Kilometers 0 0.5 1 1.5 2
 1:40,000



Produced by USAG-HI
 DPW-ENV, Cultural Resources

D. Crowley
 01-March-2017

Army Training Areas O'ahu Island Schofield Barracks South Range (SBS)

 Schofield Barracks South Range

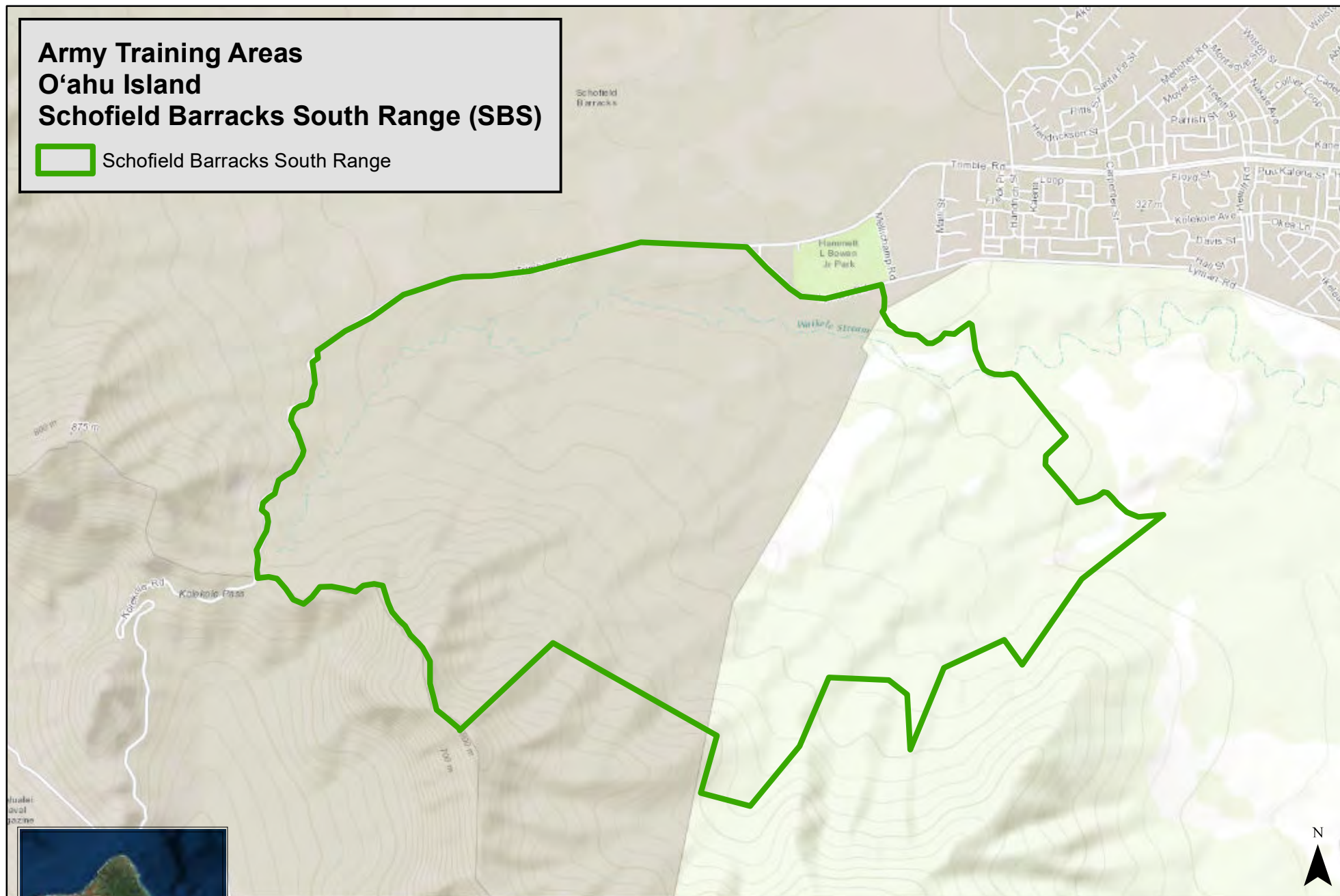


FIGURE 9
Topographic Map of Schofield Barracks South Range
O'ahu Island
Programmatic Agreement
for Routine Military Training and Related Activity


Kilometers 0 0.25 0.5 0.75 1
1:25,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Schofield Barracks South Range (SBS)**

 Schofield Barracks South Range

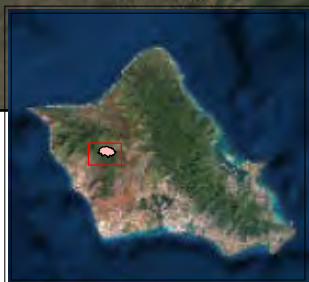
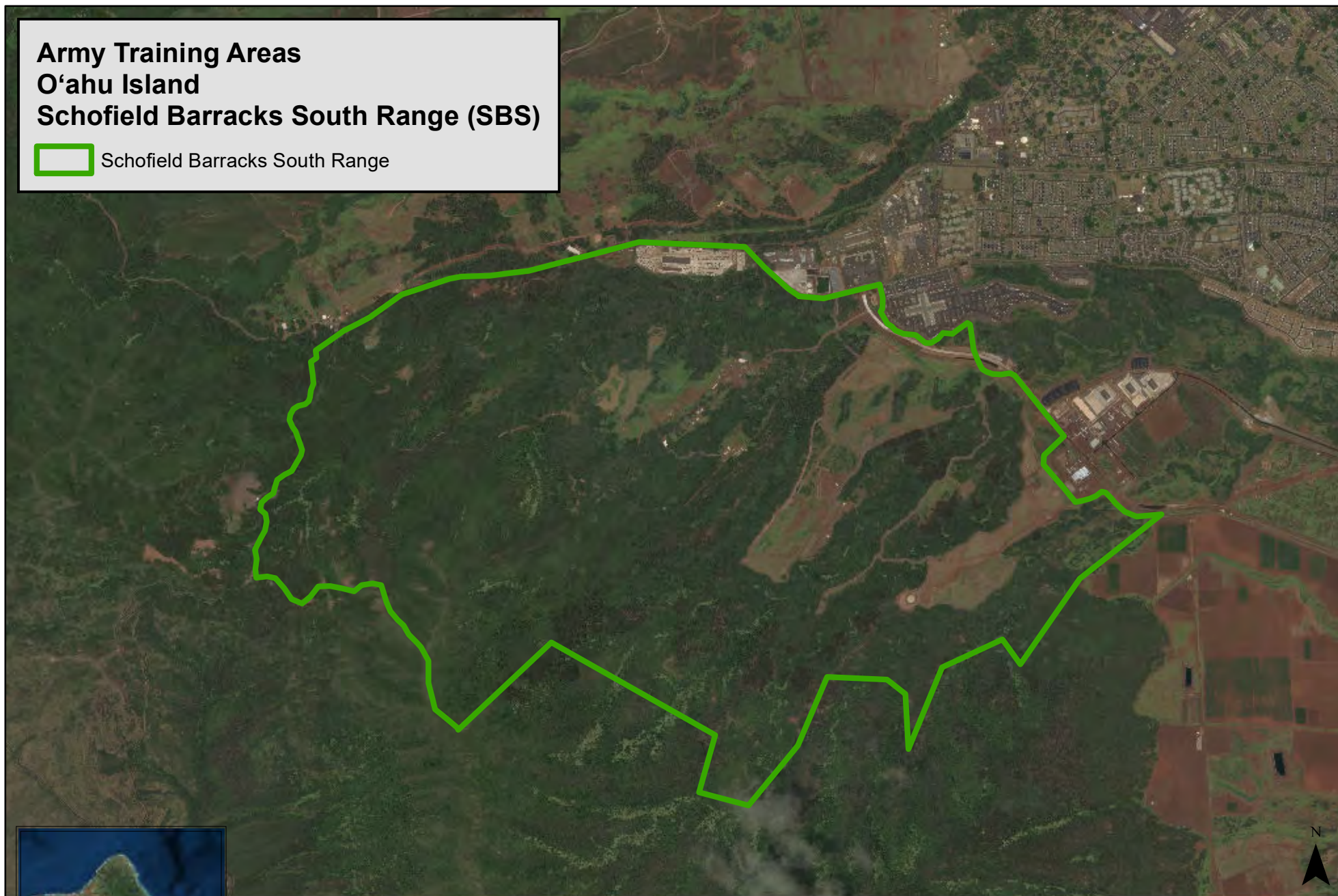


FIGURE 10
Orthophoto of Schofield Barracks South Range
O'ahu Island
Programmatic Agreement
for Routine Military Training and Related Activity


Kilometers 0 0.25 0.5 0.75 1
1:25,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Dillingham Military Reservation (DMR)**

 Dillingham Military Reservation

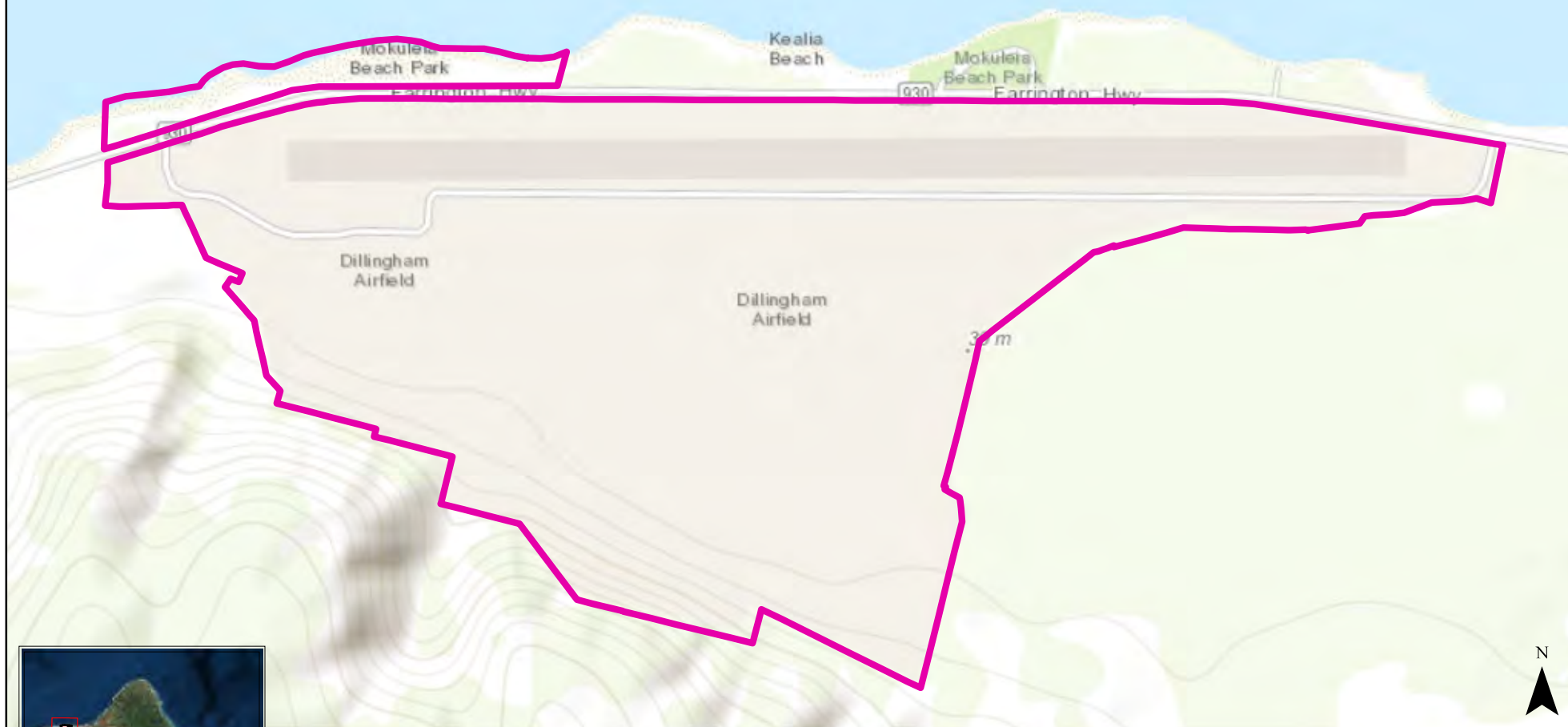


FIGURE 11
Topographic Map of Dillingham Military Reservation
O'ahu Island
Programmatic Agreement
for Routine Military Training and Related Activity

Kilometers 0 0.25 0.5 0.75 1

1:15,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Dillingham Military Reservation (DMR)**


 Dillingham Military Reservation



FIGURE 12
Orthophoto of Dillingham Military Reservation
O'ahu Island
Programmatic Agreement
for Routine Military Training and Related Activity

Kilometers 0 0.25 0.5 0.75 1

1:15,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017



0 1 2 3 4 Kilometers

FIGURE 14
Orthophoto of Kahuku Training Area
O'ahu Island
 Programmatic Agreement
 Routine Military Training and Related Activity


1:50,000

Produced by USAG-HI DPW ENV
 Cultural Resources



D. Crowley
 01-June-2017

Army Training Areas O'ahu Island Wheeler Army Airfield (WAAF)

 Wheeler Army Airfield

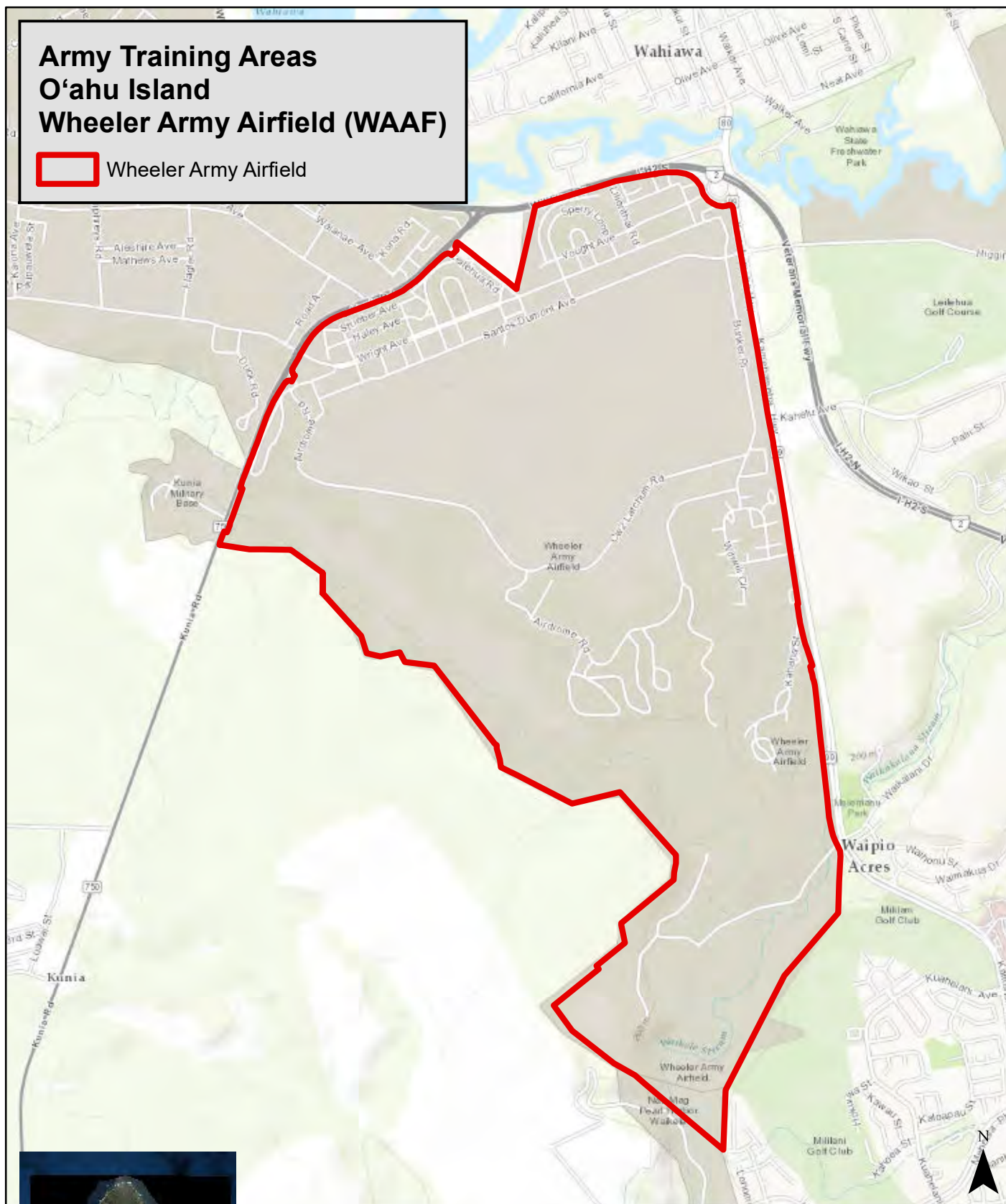


FIGURE 15
Topographic Map of Wheeler Army Airfield
O'ahu Island
Programmatic Agreement
for Routine Military Training Actions and Related Activity


1:25,000

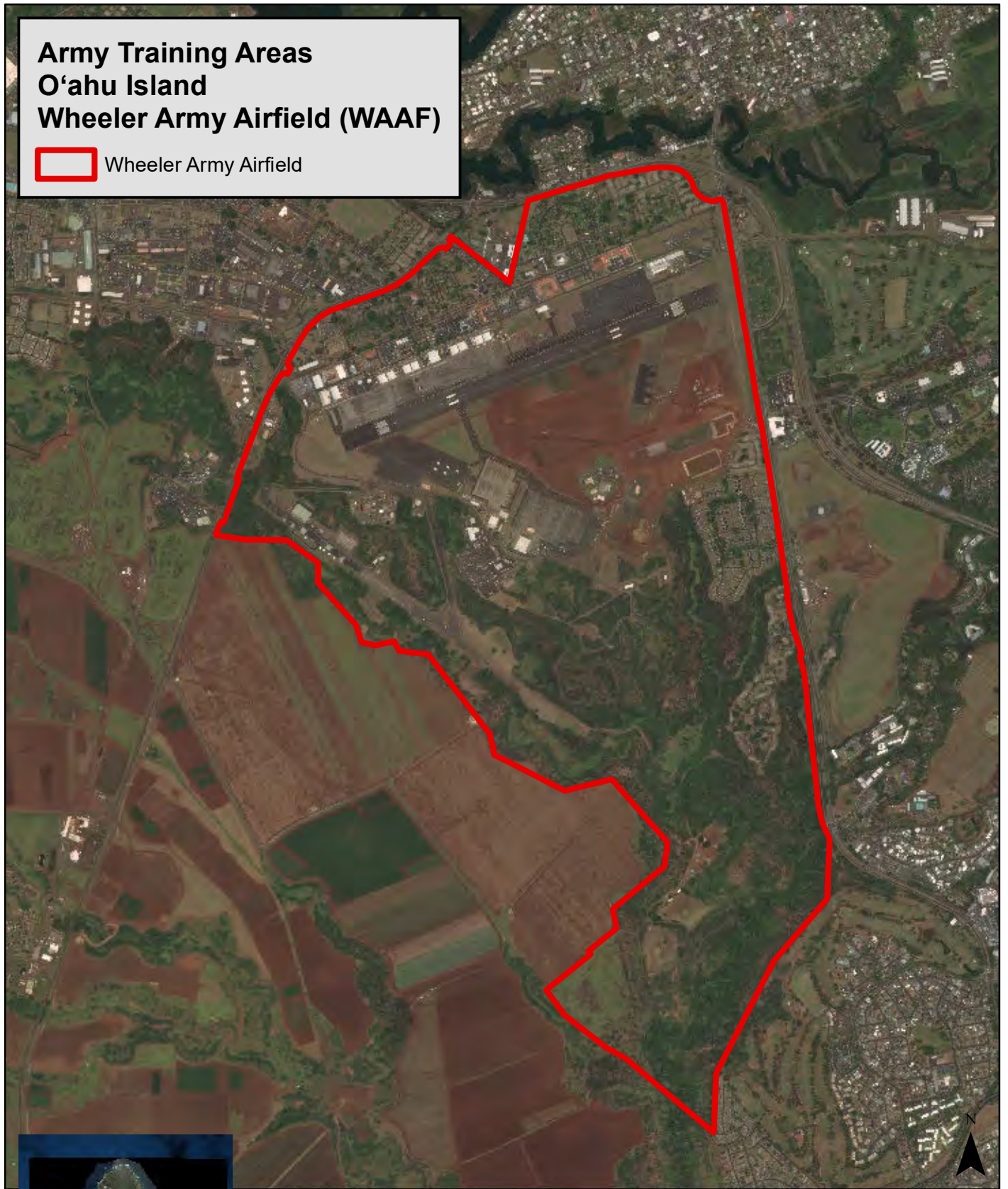
Produced by USAG-HI DPW ENV
Cultural Resources



D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Wheeler Army Airfield (WAAF)**

 Wheeler Army Airfield



0 0.25 0.5 0.75 1 Kilometers

1:25,000

FIGURE 16
Orthophoto of Wheeler Army Airfield
O'ahu Island


Programmatic Agreement
for Routine Military Training Actions and Related Activity

Produced by USAG-HI DPW ENV
Cultural Resources



D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Kawailoa K1B Training Area (K1B)**

 K1B Training Area

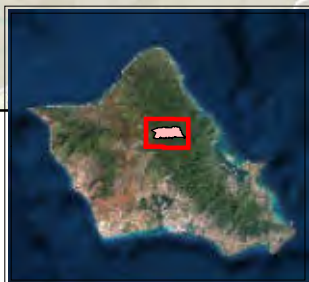
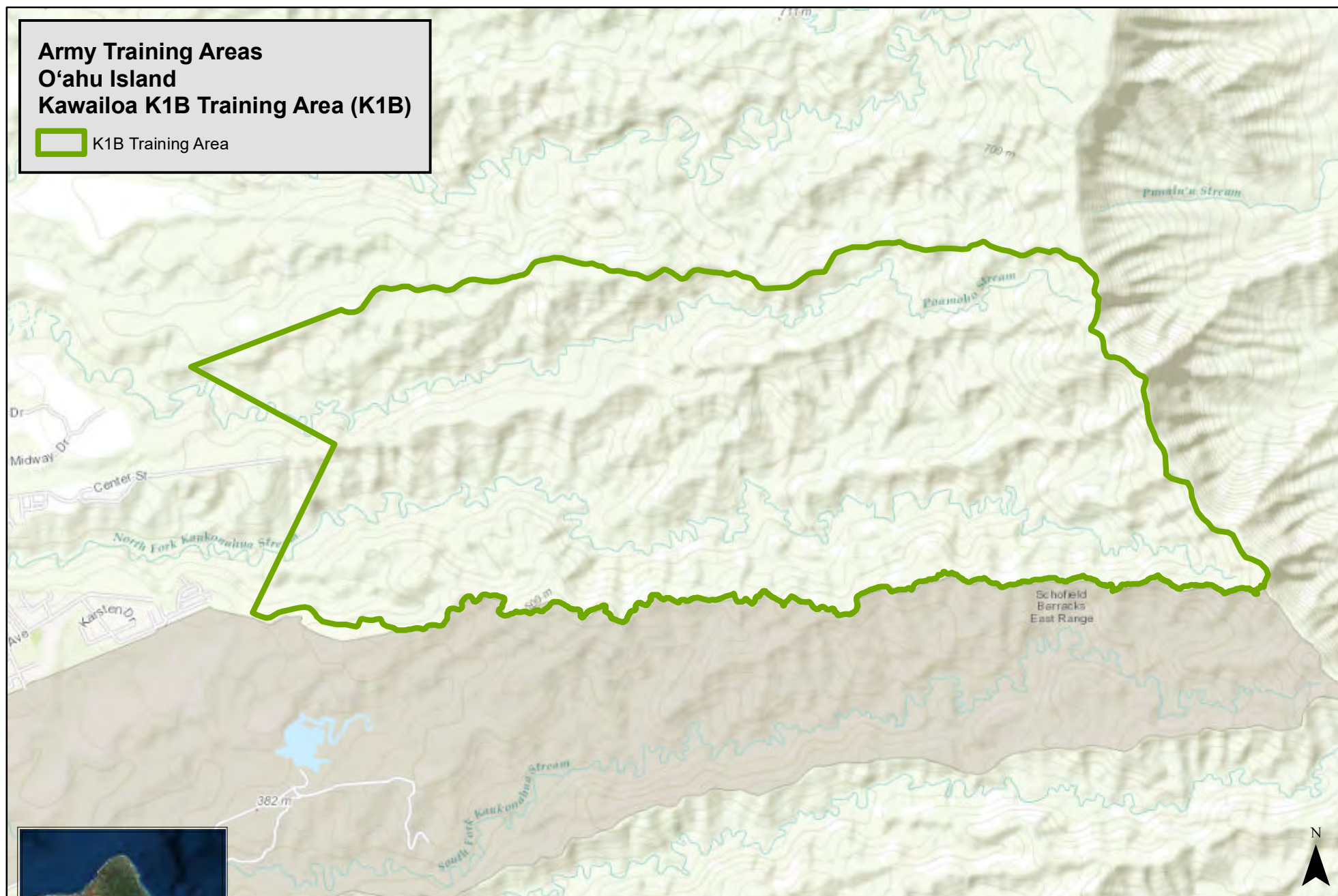


FIGURE 17
Topographic Map of Kawailoa K1B Training Area
O'ahu Island
Programmatic Agreement
for Routine Military Training Actions and Related Activity


Kilometers 0 0.5 1 1.5 2
1:40,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

**Army Training Areas
O'ahu Island
Kawailoa K1B Training Area (K1B)**

 K1B Training Area

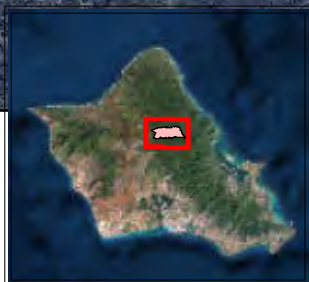
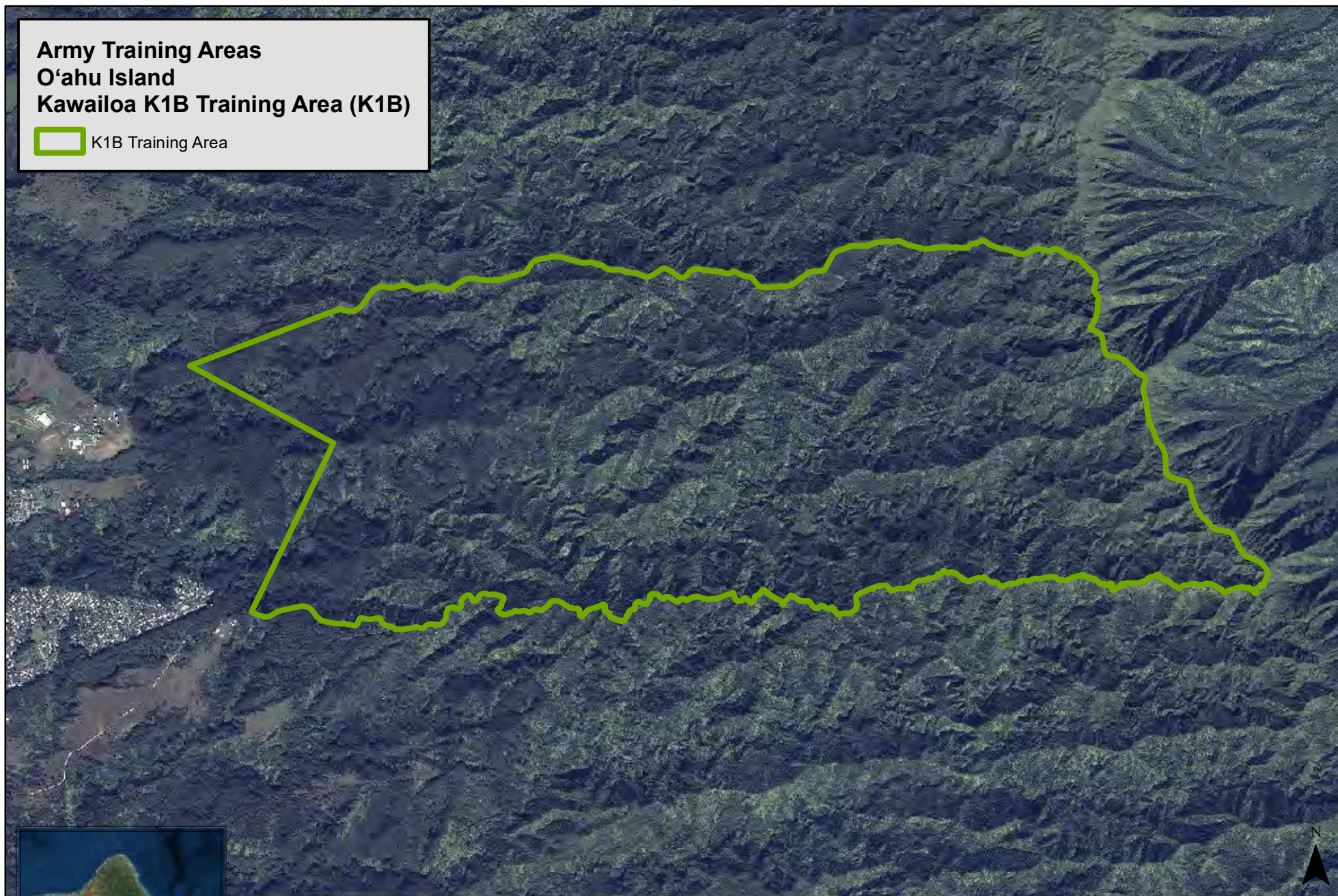


FIGURE 18
Orthophoto of Kawailoa K1B Training Area
O'ahu Island
Programmatic Agreement
for Routine Military Training Actions and Related Activity

Kilometers 0 0.5 1 1.5 2
1:40,000



Produced by USAG-HI
DPW-ENV, Cultural Resources

D. Crowley
01-June-2017

Appendix B – Maps and Lists of Areas Surveyed for Historic Properties

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation
Regarding Routine Military Training Actions and Related Activities at United States
Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Appendix B contains maps and lists of surveys conducted to identify historic properties and assessed as adequate per 36 CFR § 800.4(b). Within the scope of this agreement, the surveys listed herein will be used for training area activity reviews as specified in Stipulation II of this agreement.

This appendix may be updated pursuant to Stipulation V.B. of this agreement.

The following acronyms are used to identify organizations who have produced reports included in this appendix:

CSH: Cultural Surveys Hawaii

DPW-CRS: Directorate of Public Works – Cultural Resources Section

GANDA: Garcia and Associates

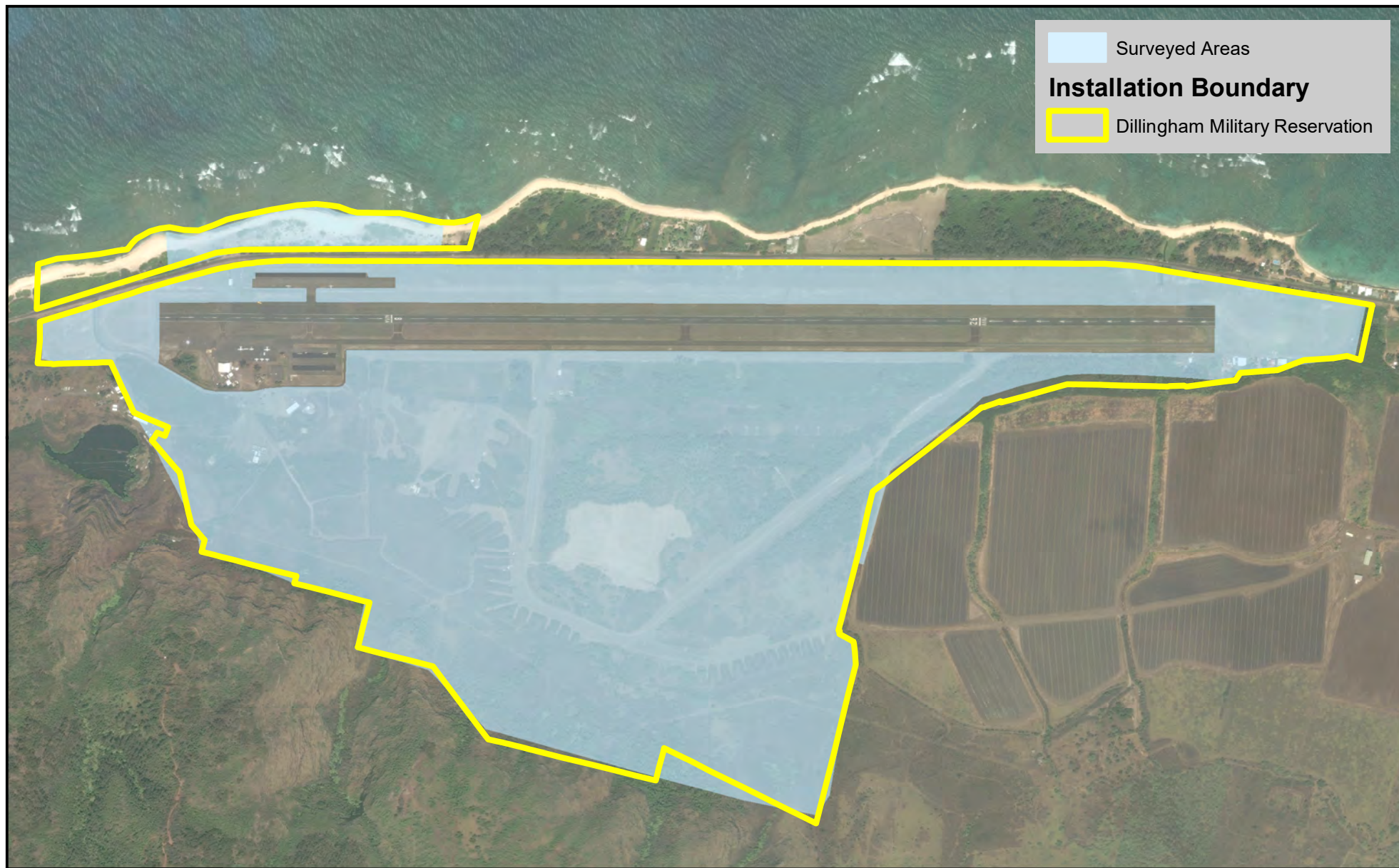
IARII: International Archaeological Research Institute, Incorporated

OGDEN: Ogden Environmental & Energy Services Company

SCS: Scientific Consultant Services

SCS/CRMS: Scientific Consultant Services/Cultural Resource Management
Service

USACE: United States Army Corps of Engineers



Appendix B, Figure 1

Surveyed Areas at Dillingham Military Reservation

Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii



Orthophoto 2015

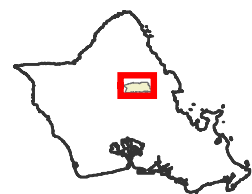
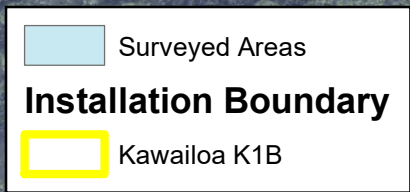
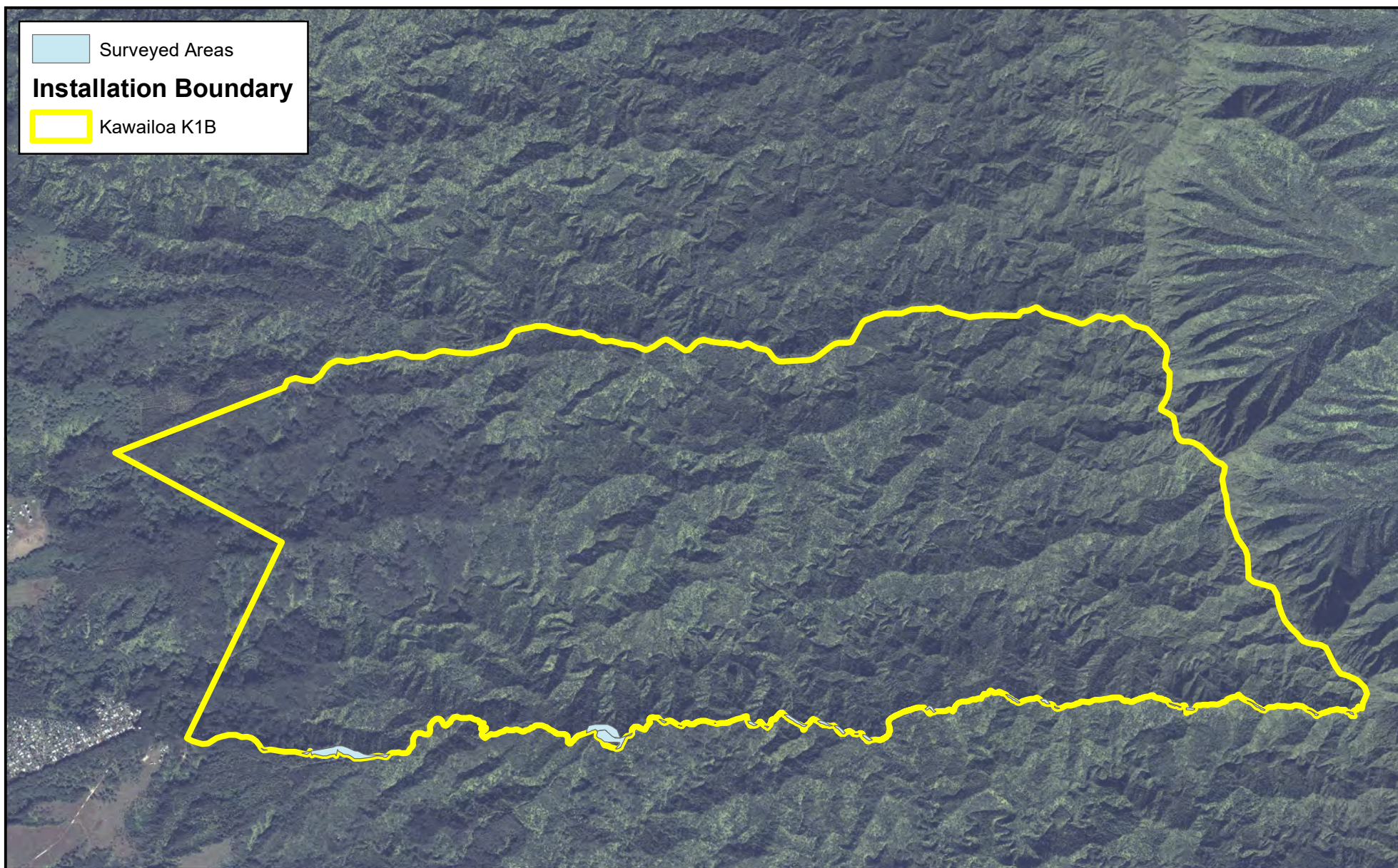


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



Surveys at Dillingham Military Reservation

Report #	Author	Report Title	Organization
CRS-08-001	Exzabe and Antone 2007	Cultural Resources Inventory Survey of Fire Acres at Dillingham Military Reservation, B-Gate, for the Integrated Wildland Fire Management Program Vegetation Clearance Project	DPW-CRS
1618	McGerty and Spear 2001	Cultural Resources Inventory Survey of the Dillingham Military Reservation (DMR) Ahupua'a of Mokule'ia, Kawailoa, Kealia, and Ka'ena, Waialua District, O'ahu Island, Hawai'i	SCS/CRMS
1429	McGerty and Spear 2010	Phase I and II Evaluations of All Previously Unidentified Site Areas Associated With Known Site Complexes, Dillingham Military Reservation, Island of O'ahu, Hawai'i	SCS/CRMS
1719	Moblo 1991	Literature Review and Archaeological Reconnaissance Survey for Dillingham Airfield Master Plan Area, O'ahu, Hawai'i	IARII
1084	Streck 1986	Archaeological Investigations at Mokule'ia Army Beach, O'ahu, Hawai'i	USACE Pacific Ocean Division



Appendix B, Figure 2

Surveyed Areas at Kawaioloa K1B
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii



Orthophoto 2010

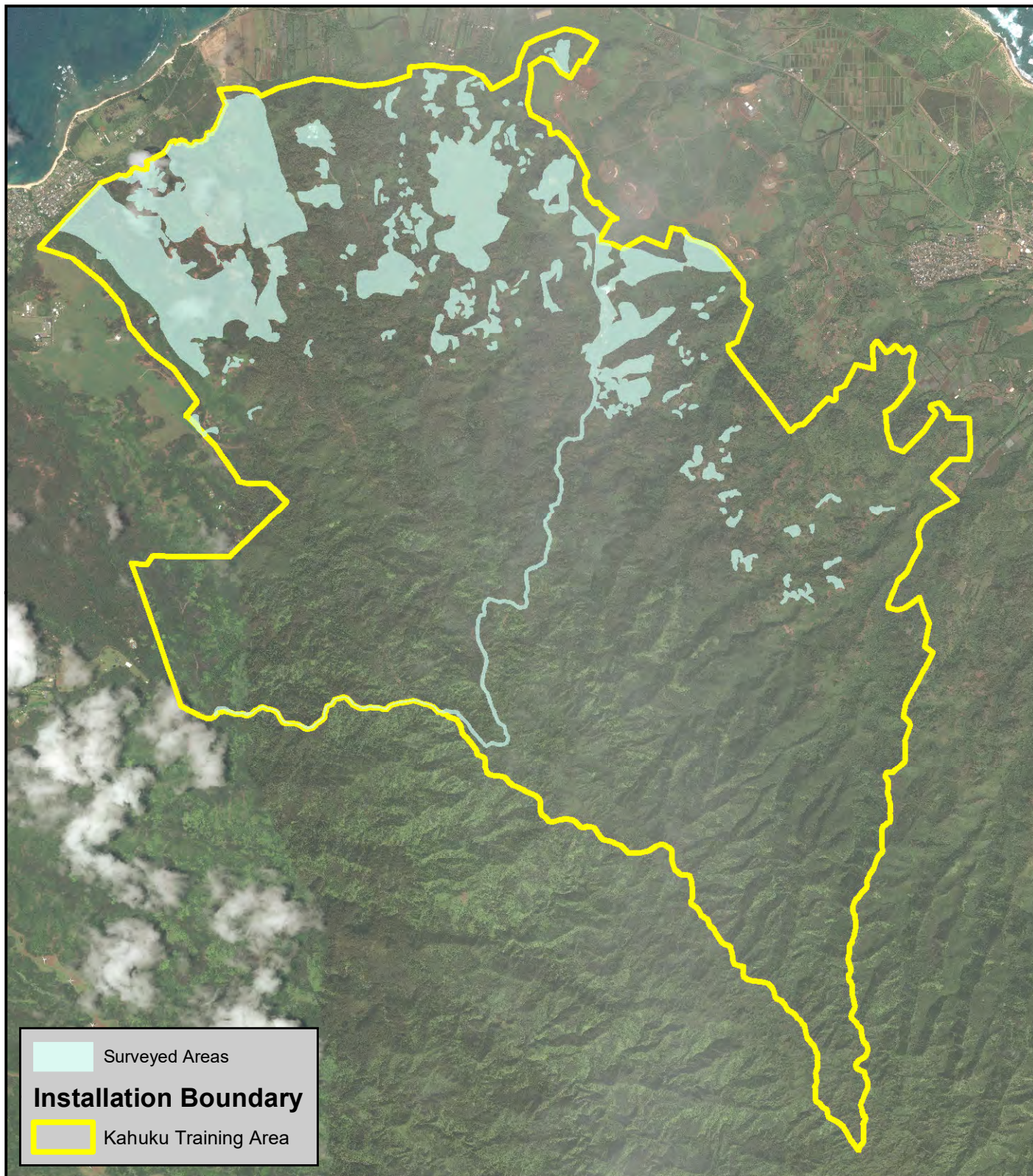


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018

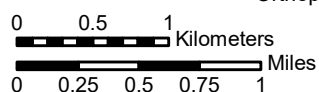


Surveys at Kawaihoa K1B Training Area

Report #	Author	Title	Organization
1315	Robins and Spear 2002a	Cultural Resources Inventory Survey and Limited Testing, Phase I, of the Schofield Barracks Training Areas for the Preparation of a Cultural Resources Management Plan for Training Ranges and Areas	SCS/CRMS
1323	Robins and Spear 2002b	Cultural Resources Inventory Survey and Limited Testing, Phase II, of the U.S. Army Schofield Barracks Training Areas for USAG-HI Ecosystem Managment Program, Island of Oahu, Hawaii	SCS/CRMS



Orthophoto 2015



Appendix B Figure 3

Surveyed Areas at Kahuku Training Area
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

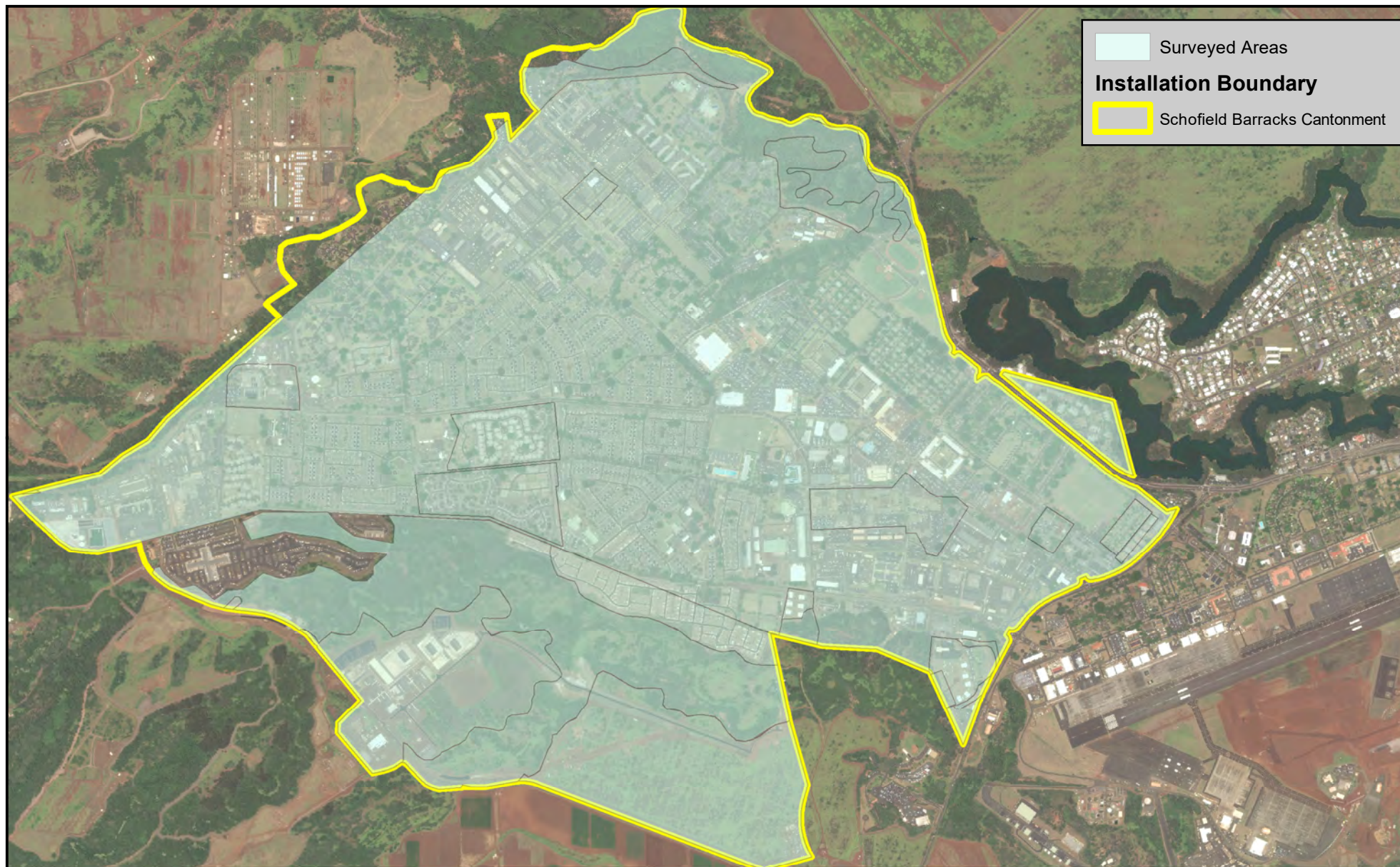
Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
4/16/2018

N
1:50,000



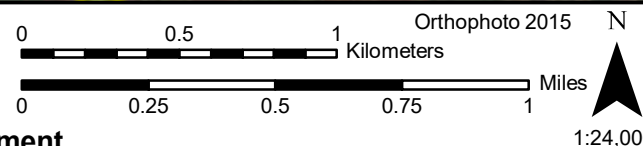
Surveys at Kahuku Training Area

Report #	Author	Title	Organization
1974	Burke et al. 2013	Final Archaeological Cultural Monitoring Report for the Kahuku Tactical Vehicle Wash Facility, U.S. Army Kahuku Training Area	CSH
1623	Descantes et. al 2009	Archaeological and Cultural Monitoring Report for Unexploded Ordnance Clearance at the Proposed Combined Arms Training Facility, Kahuku Training Area, O'ahu Island, Hawai'i	GANDA
1344	Drolet 2000	Archaeological Inventory Survey of Area A1, Kahuku Training Area, O'ahu Island, Hawai'i	OGDEN
1426	O'Rourke 2004	Phase II Archaeological Investigation in Kahuku Training Area, U.S. Army Garrison, Primary Assembly Area 1 (PAA 1), Waiale'e and Pahipahi'alua Ahupua'a, Island of O'ahu, Hawai'i	SCS
1981	Patolo et al. 2010	Phase I Archaeological Survey with Limited Subsurface Testing in Support of Designated "GO" Areas for Stryker Manuever in the U.S. Army Kahuku Training Area, Island of O'ahu, Hawai'i	SCS/CRMS
1211	Whitehead et al. 2005	Archaeological Inventory Survey for Improvements to the Drum Road: Helemano Military Reservation to Kahuku Training Area Oahu, Hawaii	Pacific Legacy



Appendix B, Figure 4

Surveyed Areas at Schofield Barracks Cantonment
 Programmatic Agreement
 for Routine Military Training and Related Activity
 Oahu, Hawaii



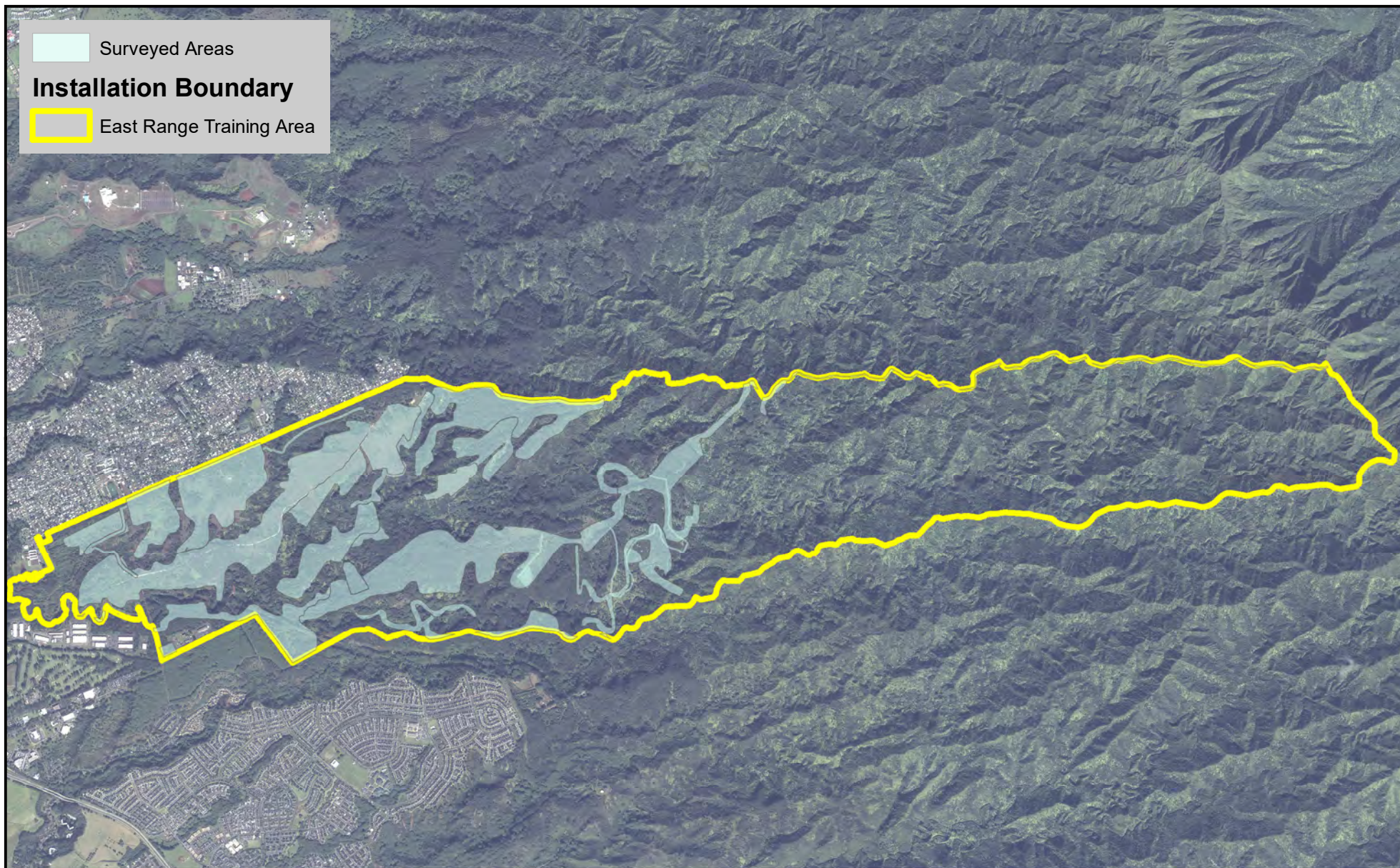
Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 1/19/2018



Surveys at Schofield Barracks Cantonment

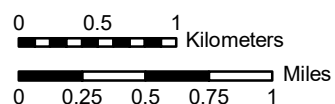
Report #	Author	Title	Organization
1307	Bouthillier et al. 1997	Historic Preservation Measures for Inclusion in an Environmental Assessment of Proposed Family Housing Revitalization Projects at Sites A, U, V, and Duckfield, Schofield Barracks Military Reservation	OGDEN
1232	Buffum & Desilits 2004	Archaeological Surveys of Proposed Training Areas for the Stryker Brigade Combat Team (SBCT) U.S. Army Hawaii, Schofield Barracks	GANDA
1988	Hibbard et al. 2010	Final report on the Bridge and Ford Recordatoin along Helemano Military Trail	CSH
1614	McIntosh et al. 1995a	Report of Archaeological Inventory Survey with Subsurface Testing for Work Area 1 of the Proposed Family Housing Area at Wheeler Army Airfield and Schofield Barracks Military Reservation, Oahu Island, Hawaii	BioSystems Analysis, Inc
1589	McIntosh et al. 1995b	Report of Archaeological Inventory Survey with Subsurface Testing for Work Area 2 of the Proposed Family Housing Area at Schofield Barracks Military Reservation, Oahu Island, Hawaii	BioSystems Analysis, Inc
1231	Roberts et al. 2004	Archaeological Reconnaissance Survey of U.S. Army Schofiled Barracks Military Reservation South Range Land Purchase, Oahu Island Hawaii	GANDA
1244	Robins & DeBaker 2005	Intensive Archaeological Survey of McCarthy Flats and Battle Area Complex (BAX) Training Range Construction Projects for the Stryker Brigade Combat Team (SBCT), US Army Hawaii, Schofield Barracks, Volume I: 2003 Survey Results	GANDA
1369	Tomonari-Tuggle 1997	Upland Settlement, Leilehua Ranch, and the Military: An Assessment of the Archaeology of Schofield Barracks Cantonment	IARII
745	Tulchin & Hammatt 2013	Archaeological Inventory Survey for the Grow the Army Project in Schofield Barracks, Honouliuli Ahupuaa; ACTO 4	CSH

Report #	Author	Title	Organization
1301	Williams et al. 1997	Historic Preservation Measures FY 1995-2006 Whole Barracks Renewal Program at Various U.S. Army Installations and the FY95/96 New Infantry Brigade Complex, Schofield Barracks	OGDEN



Appendix B, Figure 5

Surveyed Areas at Schofield Barracks East Range Training Area
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii



Orthophoto 2010

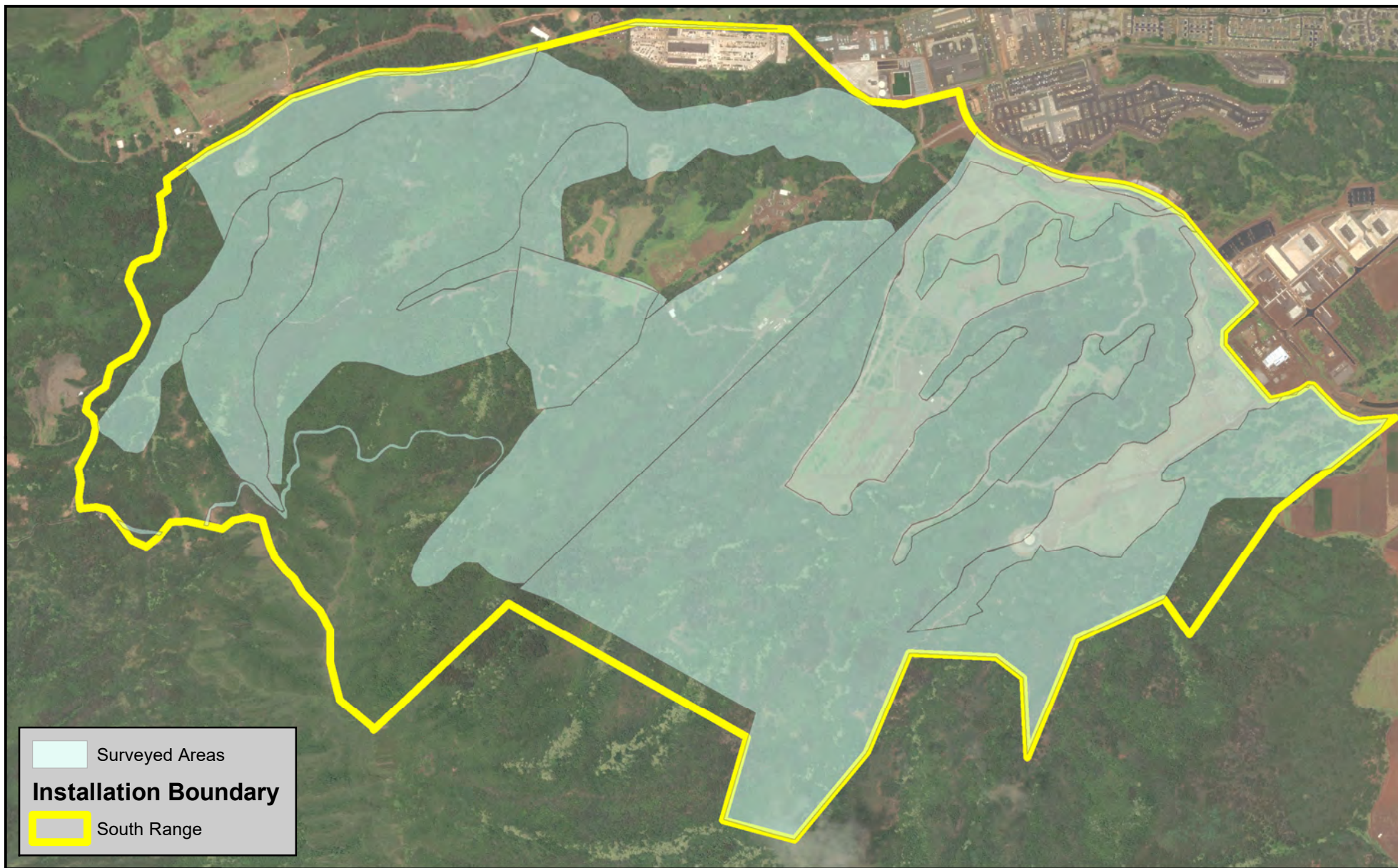


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/23/2018



Surveys at Schofield Barracks East Range

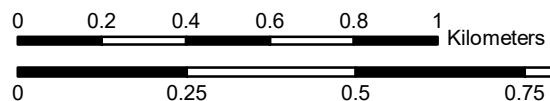
Report #	Author	Title	Organization
494	Condit 2012	Report of Pedestrian Archaeological Survey in Support of Vegetation Management at Schofield Barracks, East Range, Oahu Island, Hawaii	DPW-CRS
1648	Crowley 2015	Cultural Resources Inventory Report for the Proposed Non-Commissioned Officer Academy Parknig Lot Expansion, Schofield Barracks East Range	DPW-CRS
493	Davan 2010	Report of Archaeological Field Check of the Proposed ER1 thru ER4 Trail Rehabilitation Corridor, East Range Training Area	DPW-CRS
1315	Robins and Spear 2002a	Cultural Resources Inventory Survey and Limited Testing, Phase I, of the Schofield Barracks Training Areas for the Preparation of a Cultural Resources Management Plan for Training Ranges and Area	SCS/CRMS
1323	Robins and Spear 2002b	Cultural Resources Inventory Survey and Limited Testing, Phase II, of the U.S. Army Schofield Barracks Training Areas for USAG-HI Ecosystem Managment Program, Island of Oahu, Hawaii	SCS/CRMS
CRS-17-015	Soltz and Ingleman 2017	Cultural Resources Inventory Report for Two Proposed Short Range Training Ammunition Firing Ranges in Schofield Barracks East Range	DPW-CRS



Appendix B, Figure 6

Surveyed Areas at Schofield Barracks South Range Training Area

Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii



Orthophoto 2015

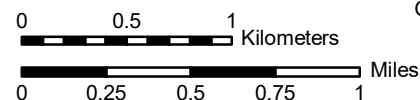
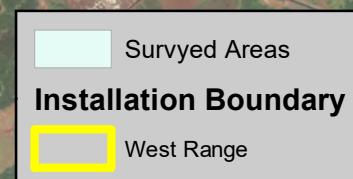
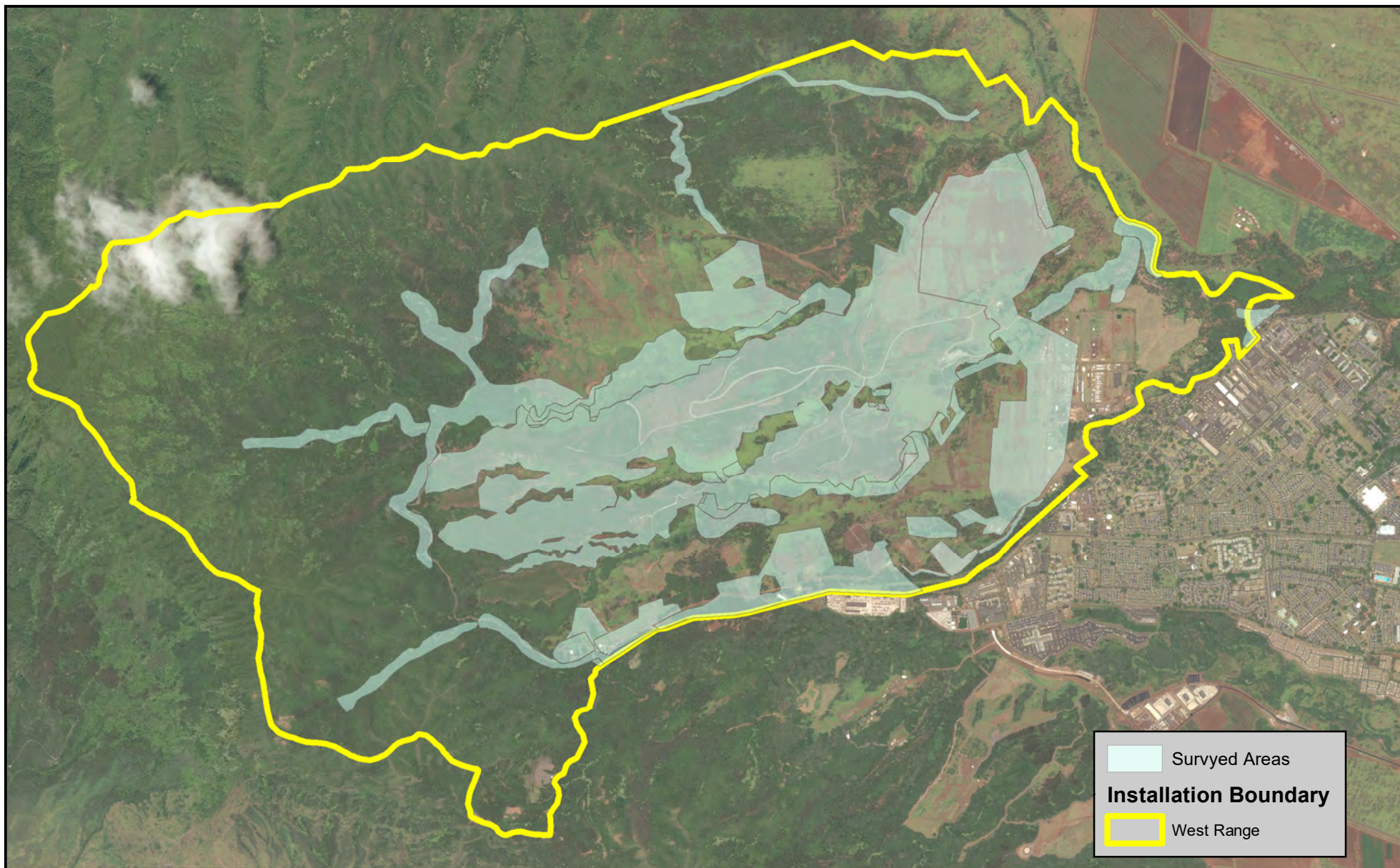


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



Surveys at Schofield Barracks South Range

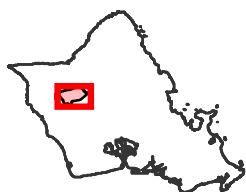
Report #	Author	Title	Organization
1443	DeBaker et al. 2009	Archaeological and Cultural Monitoring for Construction of the Urban Assault Course at Schofield Barracks Training Range for the Stryker Brigade Combat Team	GANDA
CRS-06-004	Exzabe et al. 2006	Archaeological Survey of SR-3 Vegetation Management Area, Schofield Barracks South Range	DPW-CRS
1244	Robbins & DeBaker 2005	Intensive Archaeological Survey of McCarthy Flats and Battle Area Complex (BAX) Training Range Construction Projects for the Stryker Brigade Combat Team (SBCT), US Army Hawaii, Schofield Barracks, Volume I: 2003 Survey Results	GANDA
1315	Robbins and Spear 2002a	Cultural Resources Inventory Survey and Limited Testing, Phase I, of the Schofield Barracks Training Areas for the Preparation of a Cultural Resources Management Plan for Training Ranges and Area	SCS/CRMS
1323	Robbins and Spear 2002b	Cultural Resources Inventory Survey and Limited Testing, Phase II, of the U.S. Army Schofield Barracks Training Areas for USAG-HI Ecosystem Managment Program, Island of Oahu, Hawaii	SCS/CRMS
1231	Roberts et al. 2004	Archaeological Reconnaissance Survey of U.S. Army Schofield Barracks Military Reservation South Range Land Purchase, Oahu Island Hawaii	GANDA
745	Tulchin & Hammatt 2013	Archaeological Inventory Survey for the Grow the Army Project in Schofield Barracks, Honouliuli Ahupuaa; ACTO 4	CSH



Orthophoto 2015



Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



Appendix B, Figure 7

Surveyed Areas at Schofield Barracks West Range Training Area

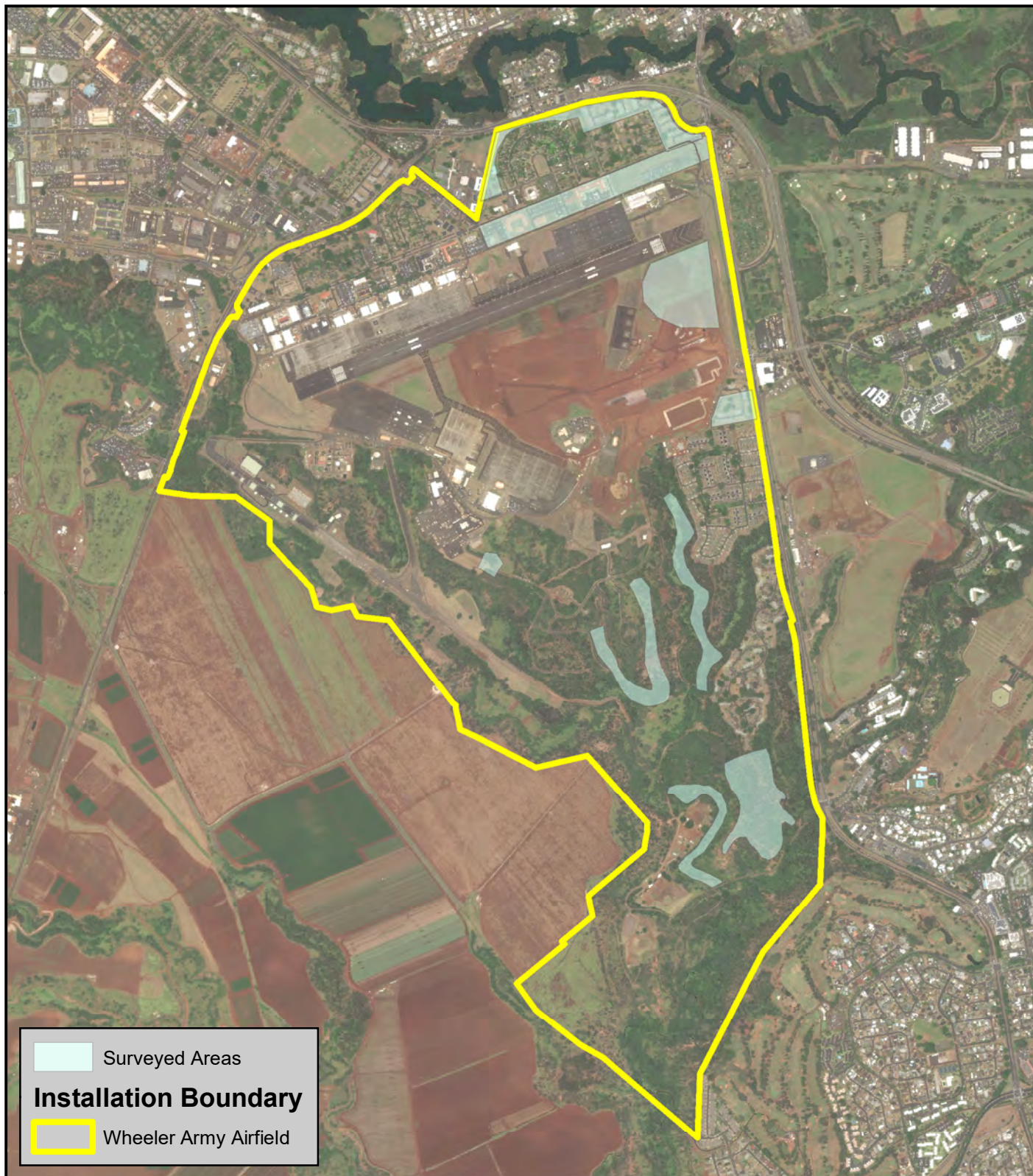
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii



Surveys at Schofield Barracks West Range

Report #	Author	Title	Organization
1466	Buffum & DeBaker 2006	Intensive Archaeological Survey and Monitoring of McCarthy Flats and Battle Area Complex Training Range Construction Projects for the Stryker Brigade Combat Team , U.S. Army Hawaii, Schofield Barracks-Volume III: 2005 Survey Results	GANDA
1247	Buffum 2005	Intensive Archaeological Survey of McCarthy Flats and Battle Area Complex (BAX) Training Range Construction Projects for the Stryker Brigade Combat Team (SBCT), U.S. Army Hawaii, Schofield Barracks -Volume II: 2004 Survey Results	GANDA
1443	DeBaker et al. 2009	Archaeological and Cultural Monitoring for Construction of the Urban Assault Course at Schofield Barracks Training Range for the Stryker Brigade Combat Team	GANDA
CRS-14-013	Duhaylonsod 2014	Archaeological Survey Along Portions of Kolekole Road for Vegetation Clearance and Firebreak Maintenance	DPW-Cultural
CRS-14-011	Exzabe & Duhaylonsod 2014	Archaeological Survey and Field Inspection of Training Ranges Along Kolekole Road at Schofield Barracks West Range	DPW Cultural Resources 2013
743	Hazlet et al. 2013	Final Archaeological and Cultural Monitoring Report of Maile Firebreak Road and Vegetation Clearance, Schofield Barracks Military Reservation, Island of O'ahu, Hawai'i	CSH
1589	McIntosh et al. 1995b	Report of Archaeological Inventory Survey with Subsurface Testing for Work Area 2 of the Proposed Family Housing Area at Schofield Barracks Military Reservation, Oahy Island, Hawaii-Draft	BioSystems Analysis, Inc
1244	Robbins & DeBaker 2005	Intensive Archaeological Survey of McCarthy Flats and Battle Area Complex (BAX) Training Range Construction Projects for the Stryker Brigade Combat Team (SBCT), US Army Hawaii, Schofield Barracks, Volume I: 2003 Survey Results	GANDA
1315	Robbins and Spear 2002a	Cultural Resources Inventory Survey and Limited Testing, Phase I, of the Schofield Barracks Training Areas for the Preparation	SCS/CRMS

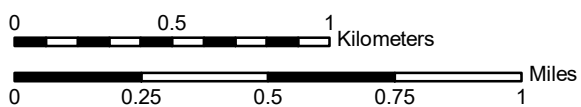
Report #	Author	Title	Organization
		of a Cultural Resources Management Plan for Training Ranges and Area	
1323	Robbins and Spear 2002b	Cultural Resources Inventory Survey and Limited Testing, Phase II, of the U.S. Army Schofield Barracks Training Areas for USAG-HI Ecosystem Managment Program, Island of Oahu, Hawaii	SCS/CRMS



Orthophoto 2015



Appendix B Figure 8



Surveyed Areas at Wheeler Army Airfield
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

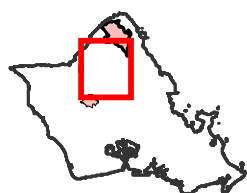
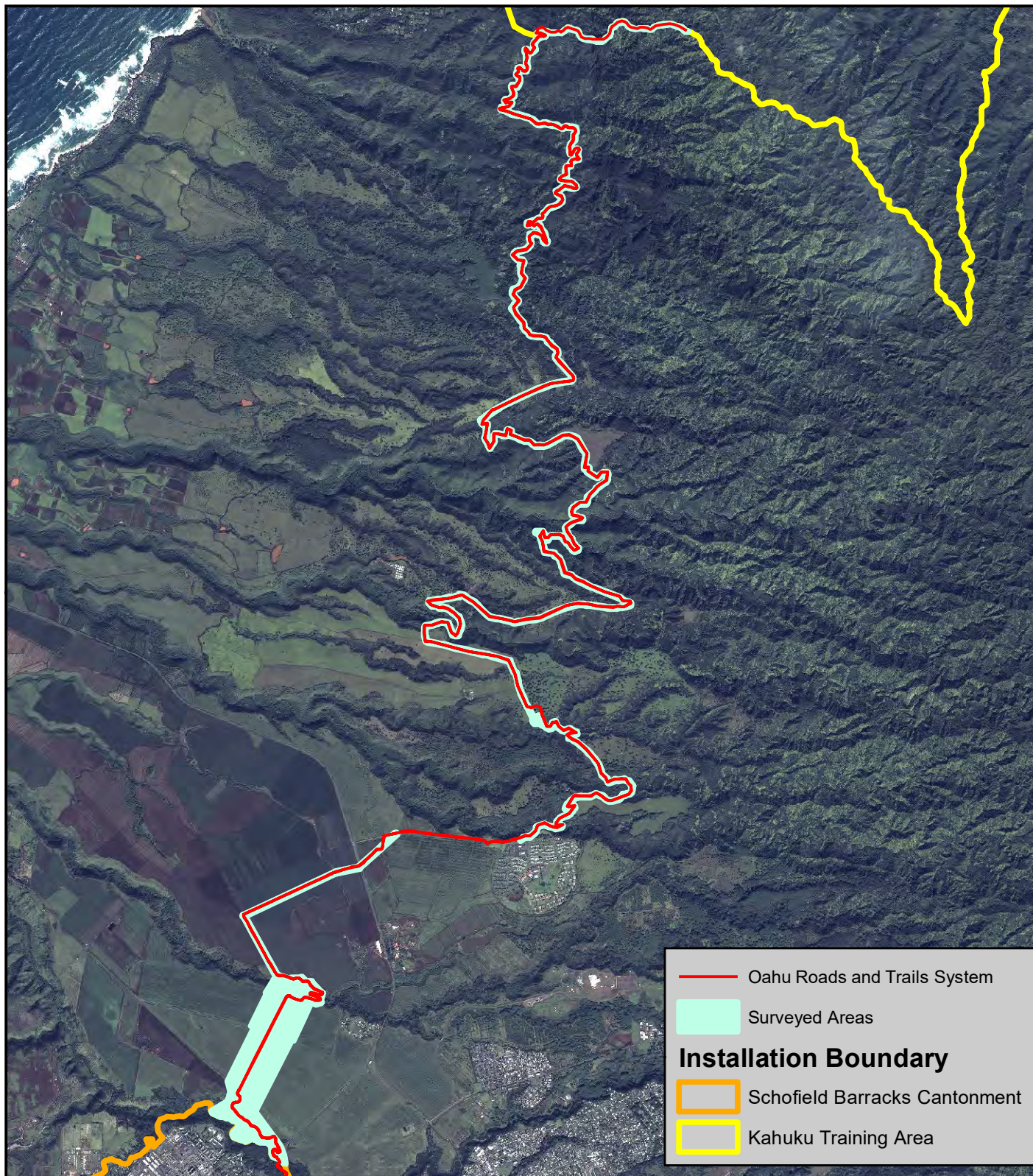


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018

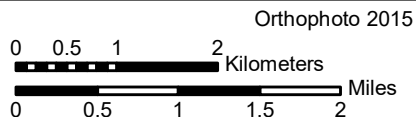


Surveys at Wheeler Army Airfield

Report #	Author	Title	Organization
368	Casciano 2015	Archaeological Monitoring Report for Ground-Disturbing Work During Construction of the Army's New Combat Aviation Brigade (CAB) Complex at Wheeler Army Airfield	DPW-CRS
1614	McIntosh et al. 1995a	Report of Archaeological Inventory Survey with Subsurface Testing for Work Area 1 of the Proposed Family Housing Area at Wheeler Army Airfield and Schofield Barracks Military Reservation, Oahy Island, Hawaii	BioSystems Analysis, Inc
1186	Tomonari-Tuggle 1994	Archaeology & History on the Central O'ahu Plateau: A Cultural Resources Assessment of Wheeler Army Airfield	IARII
1301	Williams et al. 1997	Historic Preservation Measures FY 1995-2006 Whole Barracks Renewal Program at Various U.S. Army Installations and the FY95/96 New Infantry Brigade Complex, Schofield Barracks	OGDEN



Appendix B Figure 9



Surveyed Areas Along the O'ahu Roads and Trails System
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



Surveys Along the O'ahu Roads and Trails System

Report #	Author	Title	Organization
1232	Buffum & Desilits 2004	Archaeological Surveys of Proposed Training Areas for the Stryker Brigade Combat Team (SBCT) U.S. Army Hawaii, Schofield Barracks	GANDA
CRS-05-001	Gilda 2004	2004 Nov 24 Helemano Trail Realignment Survey	DPW-CRS
1988	Hibbard et al. 2010	Final report on the Bridge and Ford Recordatoin along Helemano Military Trail	CSH
1211	Whitehead et al. 2005	Archaeological Inventory Survey for Improvements to the Drum Road: Helemano Military Reservation to Kahuku Training Area Oahu, Hawaii - Revised June 2005: Whitehead et al. 2005	Pacific Legacy
1306	Williams & Patolo 1998	Archaeological Inventory Survey of a Portion of the Kahuku Training Area for the Legacy Resource Management Program, O'ahu Island, Hawai'i	OGDEN

Appendix C – Historic Properties

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Appendix C contains maps and lists of historic properties and potential historic properties previously identified within the area of potential effect for this programmatic agreement.

The term “historic properties” includes those prehistoric or historic districts, sites, buildings, structures or objects included in, or eligible for inclusion in the National Register of Historic Places (NRHP), including properties of traditional religious and cultural importance to a Native Hawaiian organization that meet the National Register Criteria.

In this appendix, and for the purposes of this agreement, the term “potential historic properties” includes prehistoric or historic districts, sites, buildings, structures or objects that are at least 50 years old and for which no formal determination of eligibility has been made with concurrence from the Hawaii State Historic Preservation Officer, or from the Secretary of Interior pursuant to 36 CFR part 63.

Historic buildings on Schofield Barracks Cantonment and Wheeler Army Airfield are not illustrated in this appendix because they are not used for, or affected by, the types of routine military training and related activity allowed in those areas.

Historic districts on Schofield Barracks Cantonment and Wheeler Army Airfield are illustrated for reference in this appendix, but like historic buildings, they are not affected by the types of routine military training allowed in those areas.

This Appendix contains sensitive locational information related to archaeological sites and historic properties and is **FOR OFFICIAL USE ONLY**. This appendix is omitted from the public version of this document.

The information herein is protected in accordance with Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resources Protection Act, and is excluded from public disclosure under the Freedom of Information Act.

Unauthorized disclosure of this information may risk harm to historic properties and archaeological resources or impede the use of traditional religious sites by practitioners.

This Appendix shall only be made available to signatories and consulting parties to this programmatic agreement for official use related to this agreement.

The Appendix shall not be made available to the general public and may not be distributed to individuals and organizations other than signatories and consulting parties without written authorization from the Commander of the U.S. Army Garrison, Hawaii.

This appendix may be updated pursuant to Stipulation V.B. of this agreement.

Appendix D – Established Areas

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation
Regarding Routine Military Training Actions and Related Activities at United States
Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Appendix D contains maps of previously established areas within the area of potential effect for this programmatic agreement that contain training-related infrastructure such as roads, landing zones, engineer training ranges, and firing ranges.

This Appendix is **FOR OFFICIAL USE ONLY** and is omitted from the public version of this document.

The information herein is excluded from public disclosure under the Freedom of Information Act.

This Appendix shall only be made available to Signatories and Consulting Parties to this programmatic agreement for official use related to this agreement.

The Appendix must be protected from unauthorized disclosure, shall not be made available to the public, and may not be distributed without written authorization from the Commander of the U.S. Army Garrison, Hawaii.

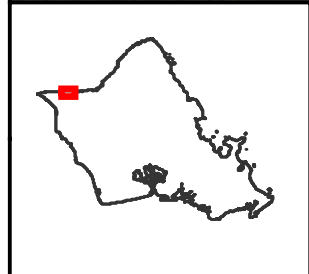
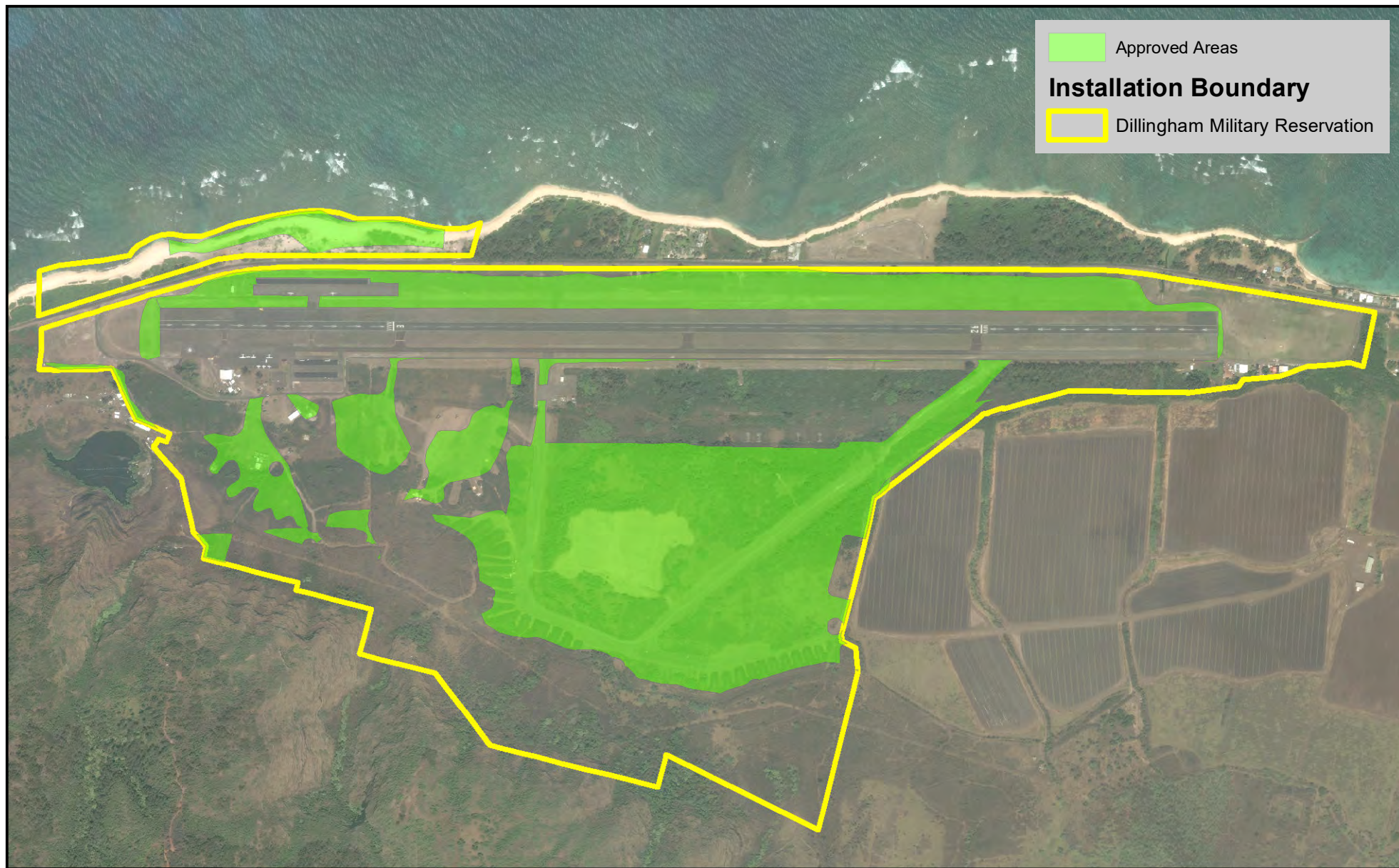
Appendix E – Approved Areas

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i

Appendix E contains maps of approved areas for the purposes of this programmatic agreement described in Stipulation II.A.2.

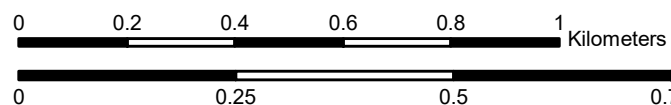
These maps are a compilation of previously surveyed areas identified in Appendix B, excluding locations of known historic properties (including potential historic properties) identified in Appendix C, and excluding the locations of sensitive Jaucas soils that are more likely to contain historic properties and other buried cultural materials. Those soils are only present at Dillingham Military Reservation.

Range Division Hawaii may use these maps in accordance with Stipulation II.A.2 to authorize undertakings proposed within the "approved areas" without further Cultural Resources Management review.



Appendix E, Figure 1

Approved Areas at Dillingham Military Reservation
 Programmatic Agreement
 for Routine Military Training and Related Activity
 Oahu, Hawaii



Orthophoto 2015

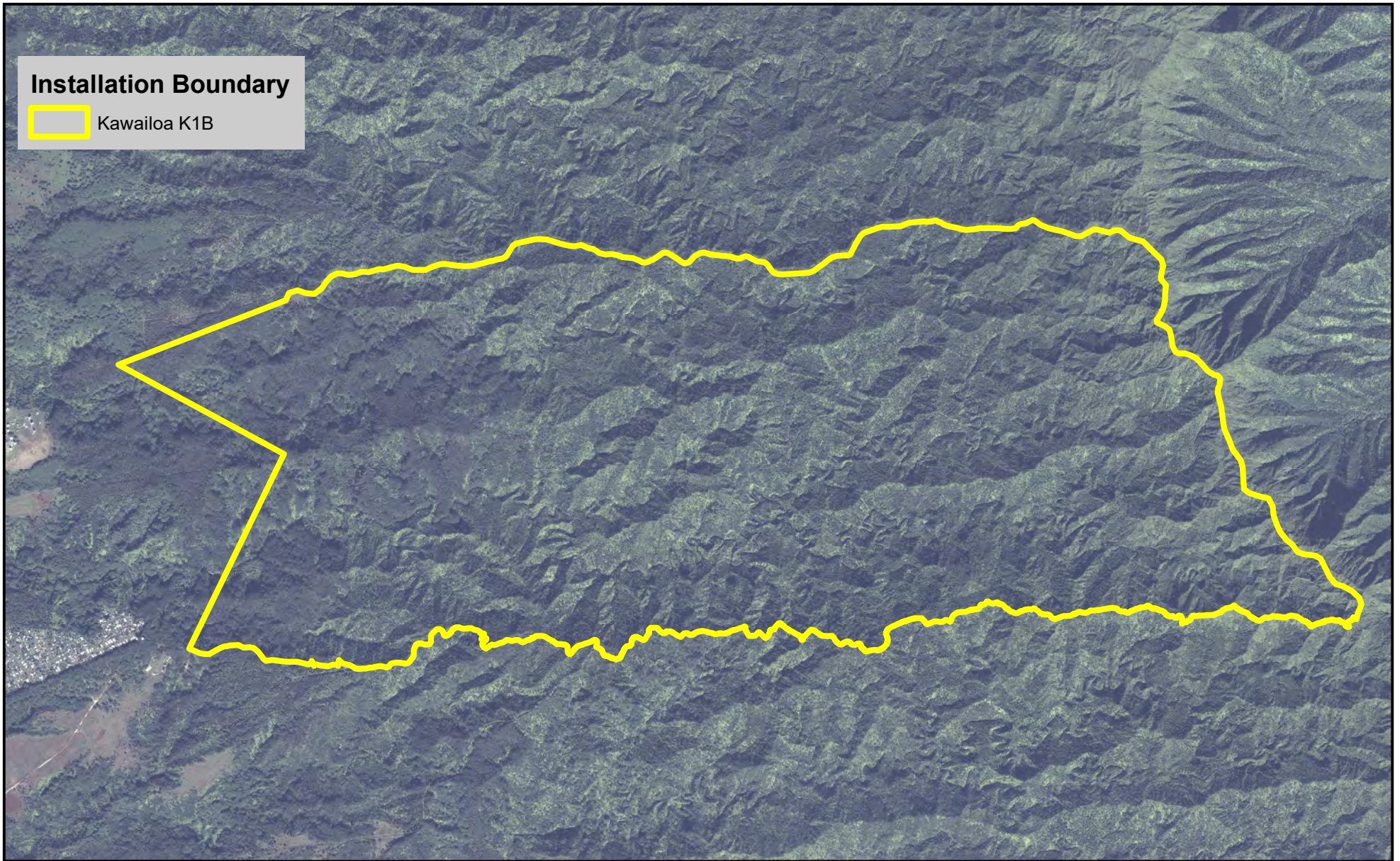


Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 4/16/2018



Installation Boundary

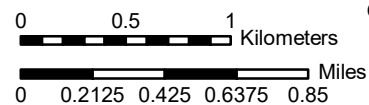
 Kailoa K1B



Appendix E, Figure 2

Approved Areas (NONE) at Kailoa K1B Training Area

Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

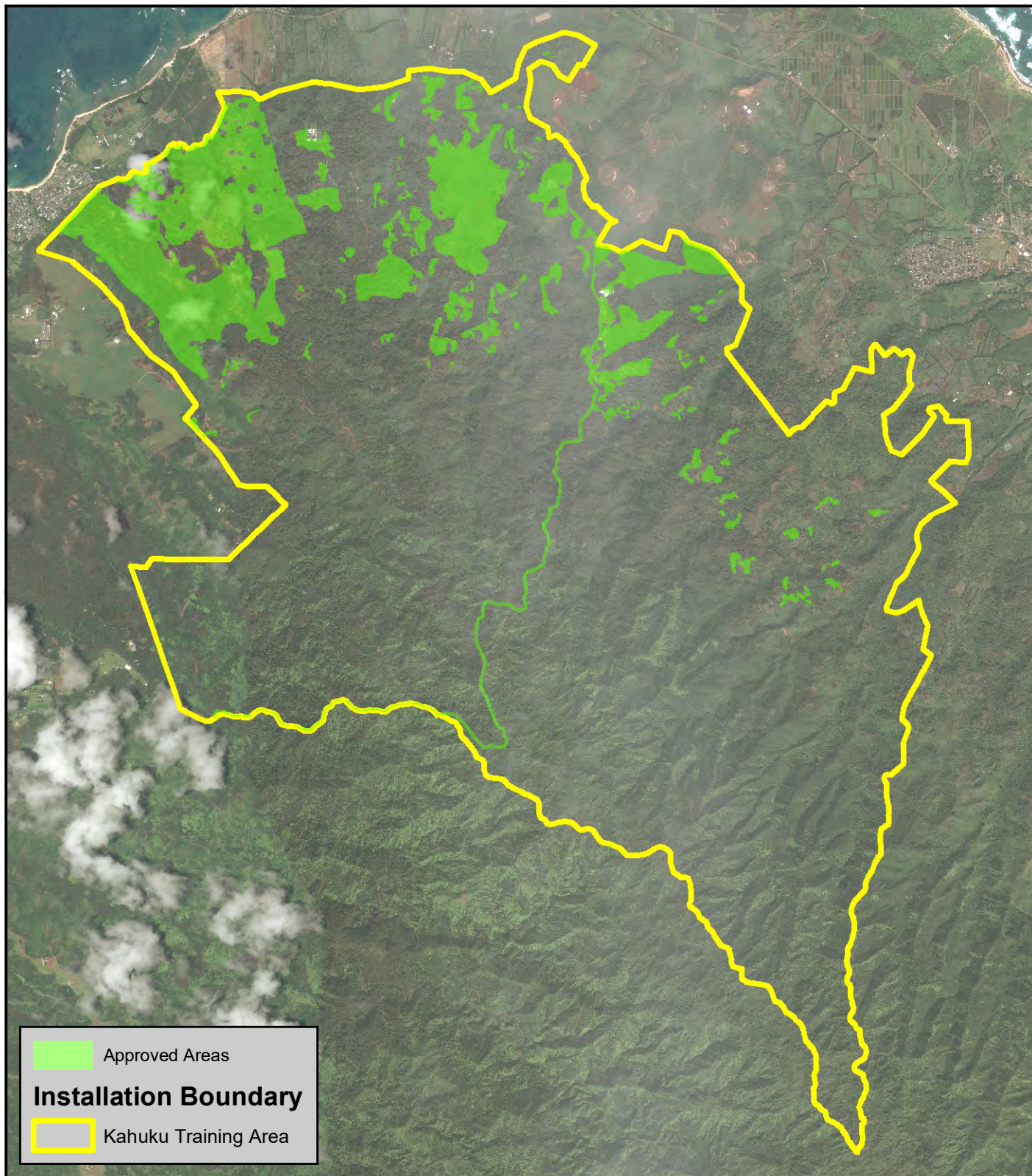


Orthophoto 2010

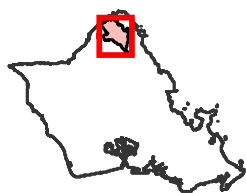


Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



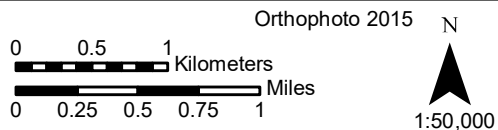


 Approved Areas
Installation Boundary
 Kahuku Training Area



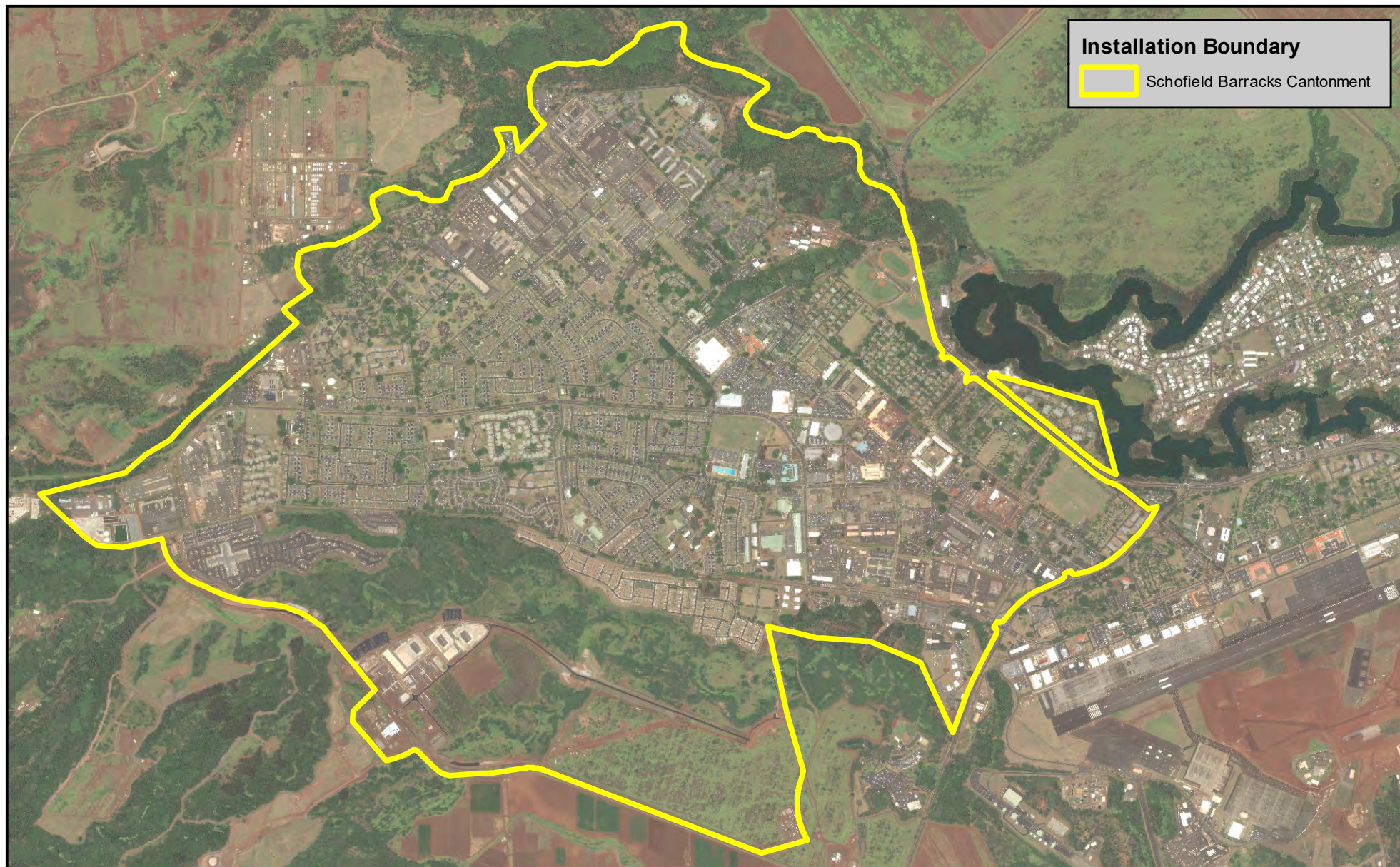
Appendix E
Figure 3


Approved Areas at Kahuku Training Area
 Programmatic Agreement
 for Routine Military Training and Related Activity
 Oahu, Hawaii



Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 4/16/2018





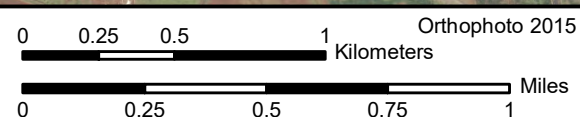
Installation Boundary
 Schofield Barracks Cantonment



n.b: There are no "approved areas" within Schofield Barracks Cantonment. Digging and excavation is not authorized in Schofield Barracks Cantonment without review and approval from the Directorate of Public Works.

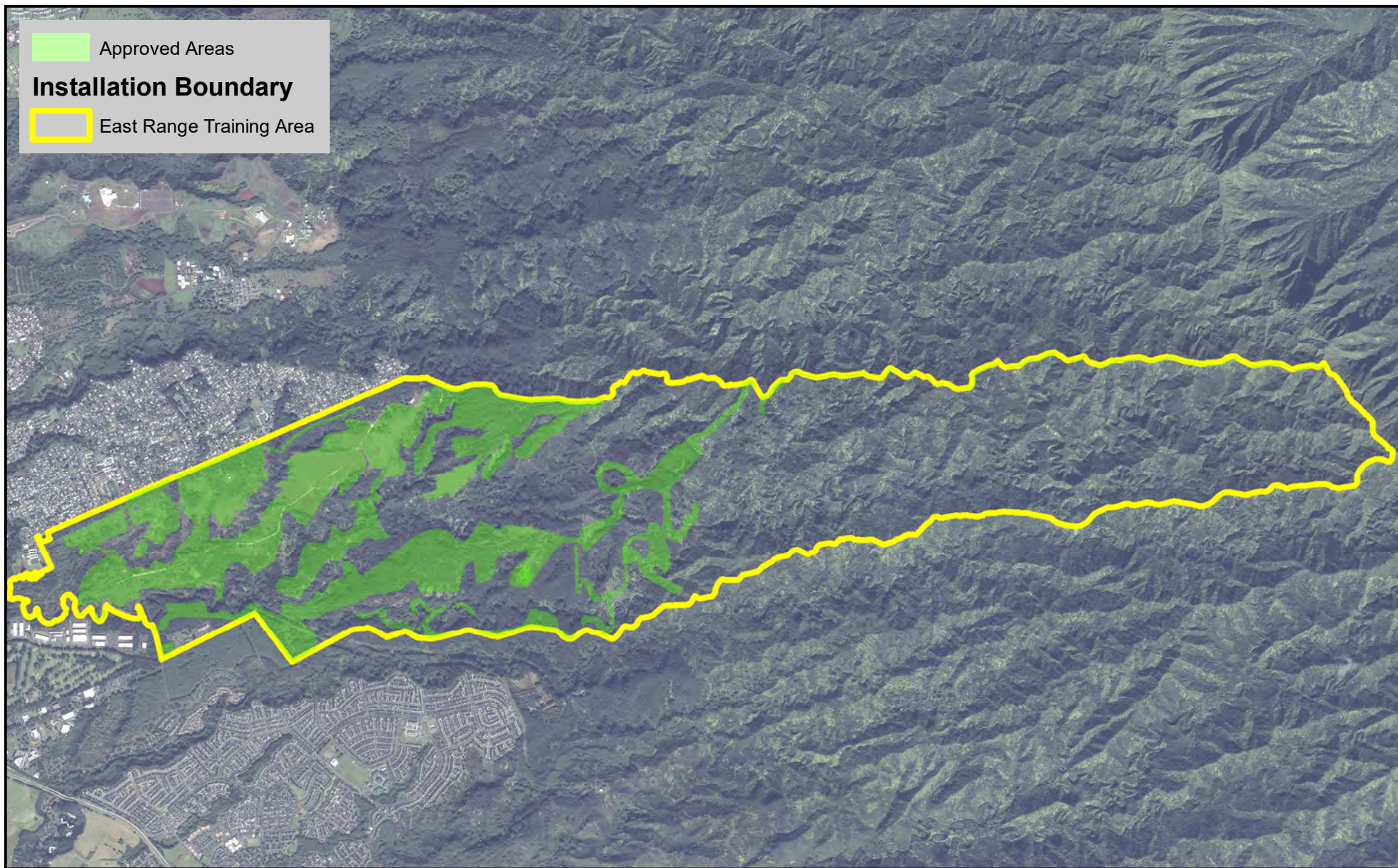
Appendix E, Figure 4

Approved Areas at Schofield Barracks Cantonment
 for Routine Military Training and Related Activity
 Oahu, Hawaii



Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 4/16/2018





Approved Areas

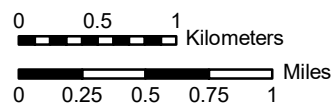
Installation Boundary

East Range Training Area



Appendix E, Figure 5

Approved Areas at Schofield Barracks East Range Training Area
 Programmatic Agreement
 for Routine Military Training and Related Activity
 Oahu, Hawaii

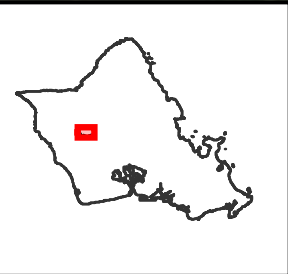
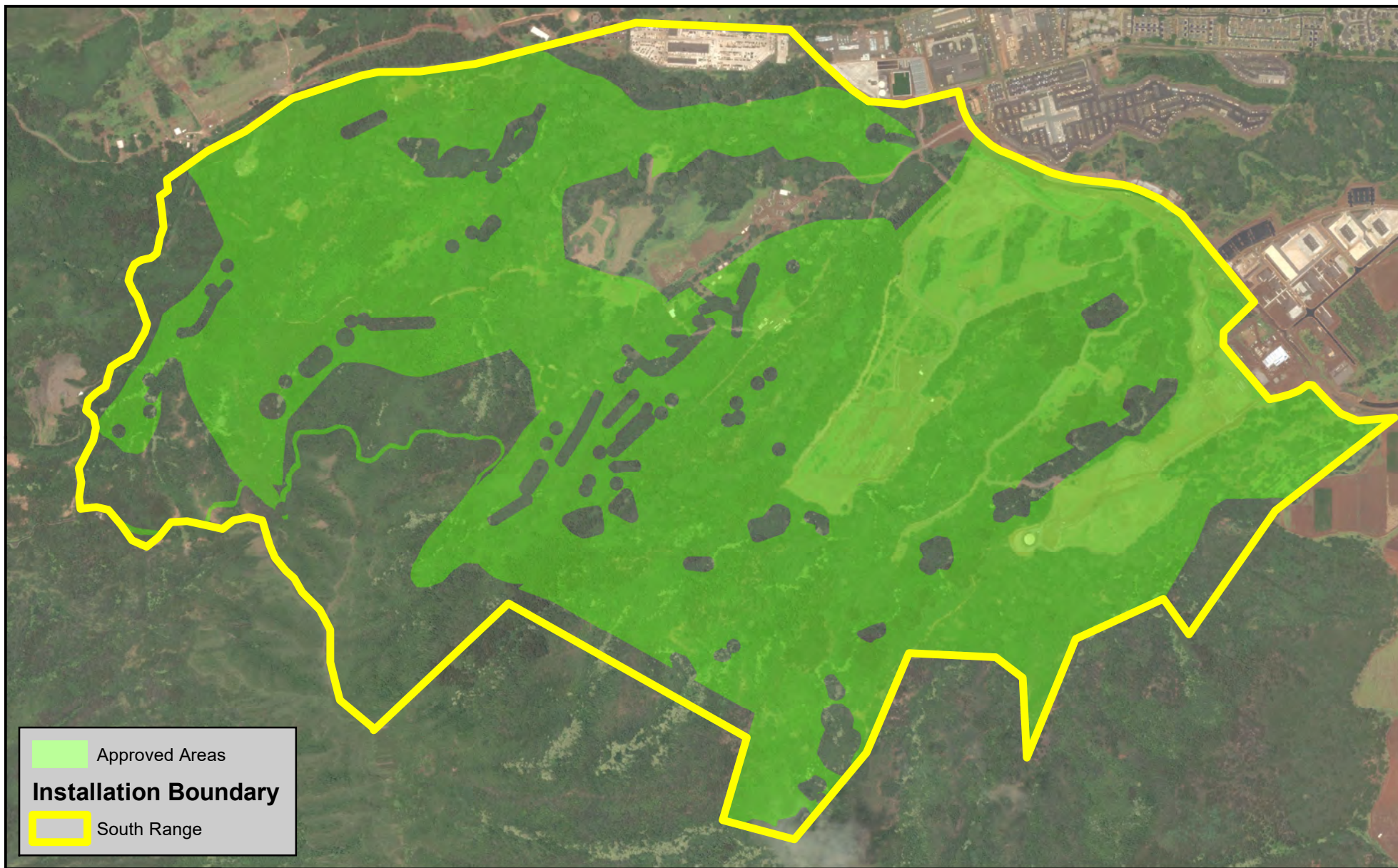


Orthophoto 2010



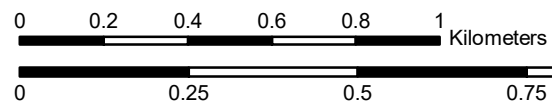
Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 1/19/2018





Appendix E, Figure 6

Approved Areas at Schofield Barracks South Range Training Area
 Programmatic Agreement
 for Routine Military Training and Related Activity
 Oahu, Hawaii

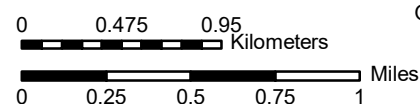
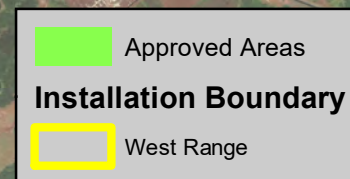
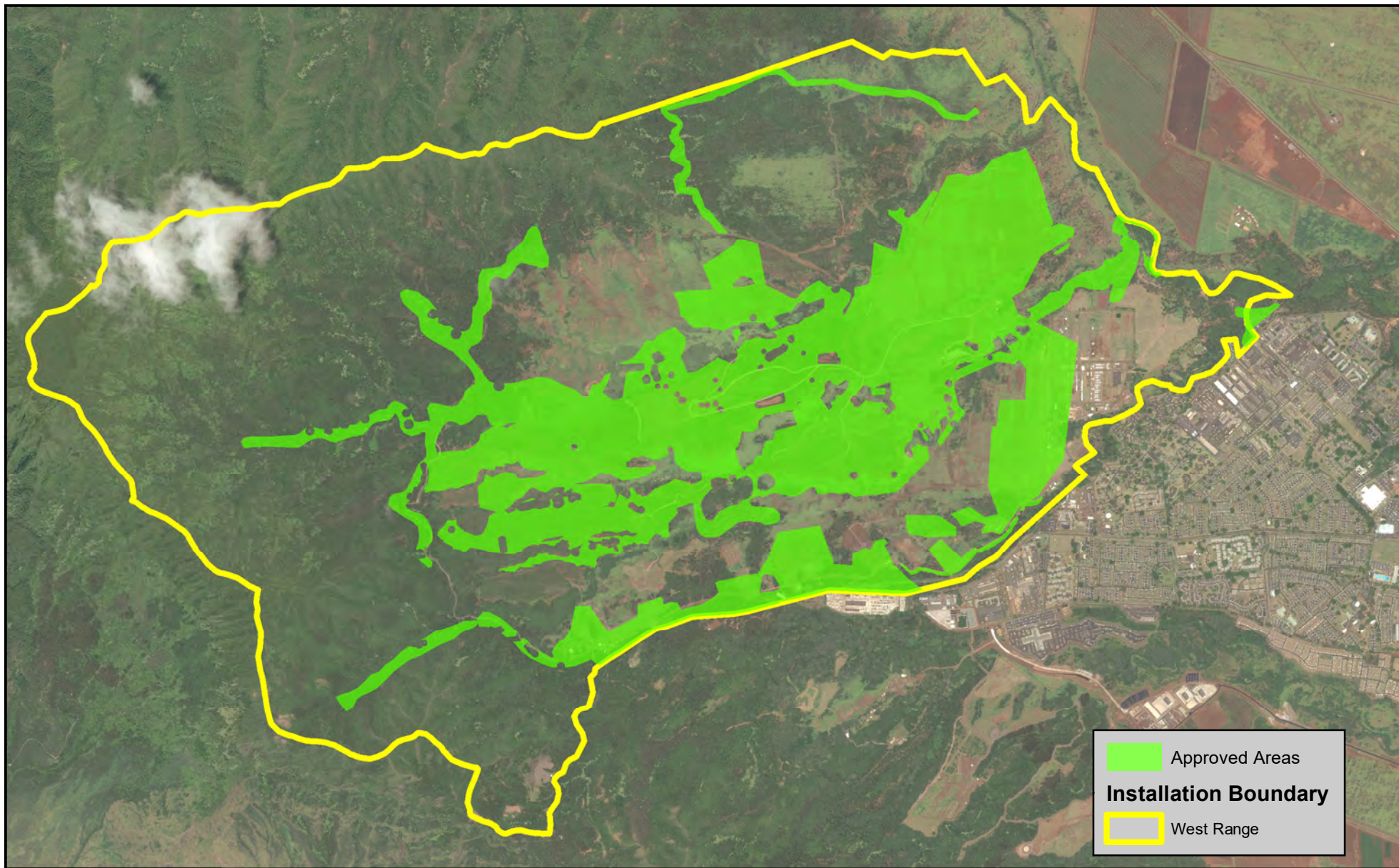


Orthophoto 2015



Produced by
 USAG-HI DPW ENV
 Cultural Resources
 D. Crowley
 1/19/2018

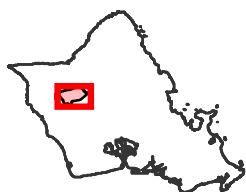




Orthophoto 2015



Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018

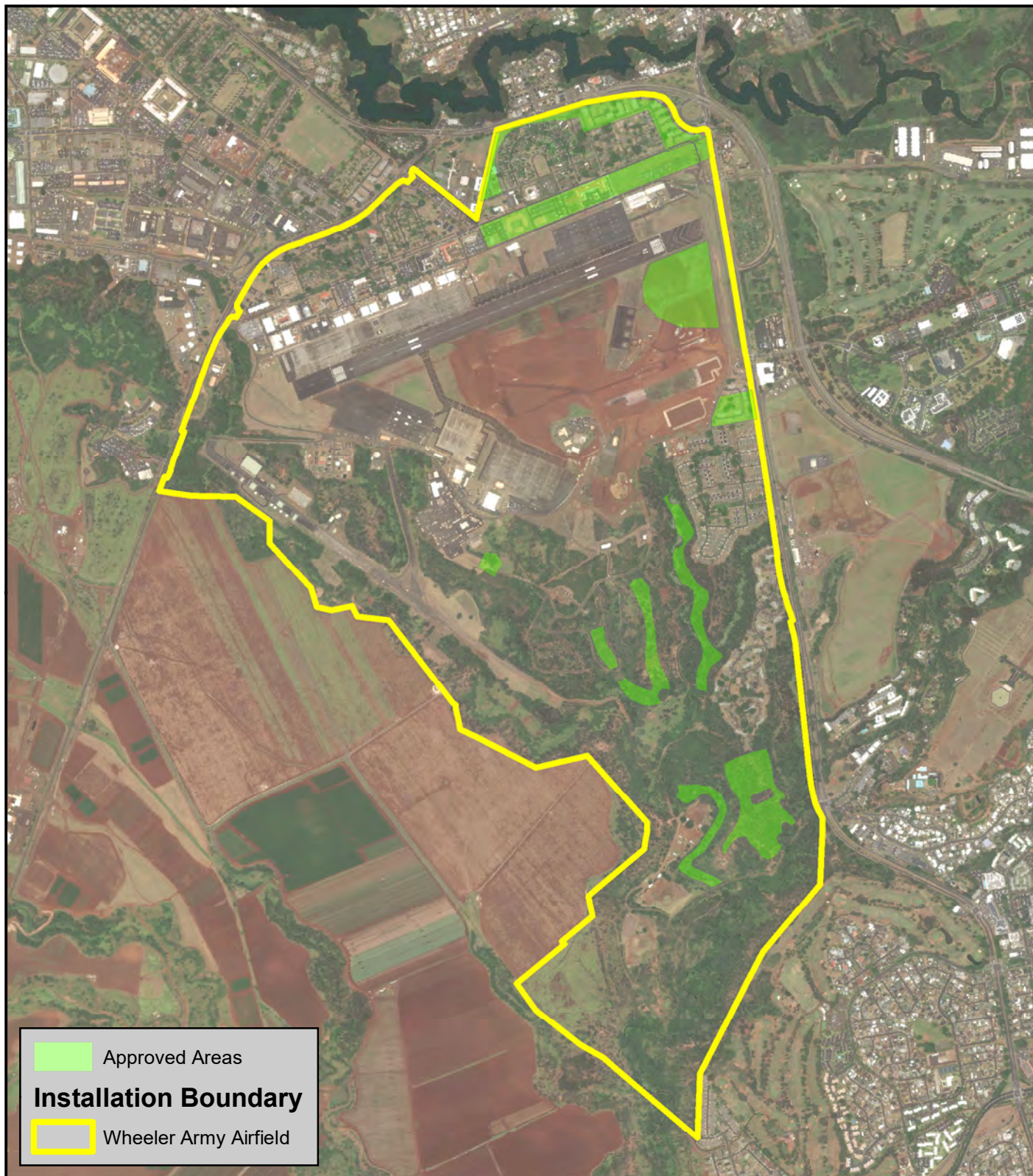


Appendix E, Figure 7

Approved Areas at Schofield Barracks West Range Training Area

Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

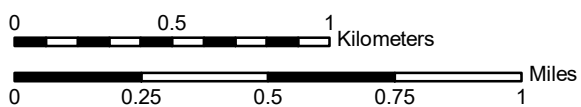




Orthophoto 2015



Appendix E Figure 8



Approved Areas at Wheeler Army Airfield
Programmatic Agreement
for Routine Military Training and Related Activity
Oahu, Hawaii

N

1:24,000

Produced by
USAG-HI DPW ENV
Cultural Resources
D. Crowley
1/19/2018



Appendix F – Cultural Resource Identification and Evaluation

This appendix defines the standard methods for identification and evaluation of potential historic properties for the purposes of this programmatic agreement (PA) in accordance with 36 CFR § 800.4.

In this appendix, the term “potential historic properties” includes all prehistoric or historic districts, sites, buildings, structures or objects in a survey area that are at least 50 years old, including properties of traditional religious and cultural importance to a Native Hawaiian organization, regardless of eligibility to the National Register of Historic Places (NRHP).

Since this PA does not authorize archaeological data recovery excavations, this appendix does not include methods for those excavations. Any archaeological excavations would have to be developed and authorized in a separate agreement specific to the property in question.

All identification, evaluation, and treatment efforts shall be conducted under the supervision of personnel who meet applicable professional qualifications. Agency personnel who conduct identification, evaluation, or treatment of potential historic properties shall meet the qualification standards established by the Office of Personnel Management for their respective disciplines in accordance with Section 112 of the NHPA (54 U.S.C. 306131). Contractors who conduct identification, evaluation, or treatment of potential historic properties on behalf of USAG-HI shall meet Secretary of Interior’s Professional Qualification Standards for their respective discipline (36 CFR Appendix A to Part 61), or shall work under the direction someone who meets those standards.

U.S. Army Garrison, Hawaii (USAG-HI) is required to make a reasonable and good faith effort to identify historic properties. Identification efforts will follow the Secretary of the Interior’s Standards and Guidelines for Identification. Identification efforts will, at a minimum, involve background research. Additional identification efforts will be guided by the results of the background research and will be appropriate to the nature and scope of the proposed project. Such efforts may include intensive pedestrian survey, subsurface evaluative testing, remote sensing techniques, architectural survey and documentation, and gathering oral histories or other information from Native Hawaiian organizations.

The purpose of background research is to determine if historic properties (or potential historic properties) have been previously recorded in the vicinity and what types of potential historic properties might reasonably be expected in a proposed survey area, to identify previous land use patterns that might have affected preservation of

Appendix F - Cultural Resource Identification and Evaluation

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O’ahu, Hawai’i

Appendix F – Cultural Resource Identification and Evaluation

historic properties, to assess physical and environmental conditions that may influence the probability of finding historic properties, and to determine what additional identification efforts are most appropriate.

As required by Stipulation III.D.2(a) of this PA, USAG-HI shall prepare a report documenting, analyzing, and synthesizing information about properties of traditional religious and cultural importance to Native Hawaiians in the training areas. Until that requirement is complete, or if the results of background research show that there has been no other effort to gather information from Native Hawaiian organizations who may have knowledge about properties of traditional religious and cultural significance in the vicinity of a proposed survey area, USAG-HI shall notify consulting parties identified in Appendix H whenever a new survey is proposed and shall request information from them about potential historic properties that may be present in the vicinity of the survey area. Consulting parties may respond to the notification within 30 days of receipt and may request a consultation meeting if they wish to share information with USAG-HI.

All information about historic properties, potential historic properties, or properties of traditional religious and cultural importance to Native Hawaiians, whether shared by Consulting Parties or documented during identification efforts, shall be protected in accordance with Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resources Protection Act, and is excluded from public disclosure under the Freedom of Information Act. Unauthorized disclosure of this information may risk harm to historic properties and archaeological resources or impede the use of traditional religious sites by practitioners.

Information about those properties shall only be made available to Signatories and Consulting Parties to this programmatic agreement for official use related to this agreement. That information shall not be made available to the general public and may not be distributed to individuals or organizations other than Signatories and Consulting Parties without written authorization from the USAG-HI Garrison Commander.

If the results of background research indicate that the area is feasible to survey, and the area has not been altered or disturbed to the extent that potential historic properties are no longer present, USAG-HI will conduct an intensive pedestrian survey to identify and document potential historic properties in the area.

Intensive pedestrian survey is not feasible on land that is greater than 60% slope (i.e. ~30 degrees or greater), land that is under water, land that is occupied by buildings, roads, or other constructed development, and land encumbered by unexploded ordnance or otherwise considered hazardous. Such areas will not be subject to

Appendix F - Cultural Resource Identification and Evaluation

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix F – Cultural Resource Identification and Evaluation

intensive pedestrian survey, but will be subject to other types of identification efforts as appropriate.

Intensive pedestrian surveys will consist of one or more appropriately qualified and supervised personnel walking transects spaced between 5 and 15 meters apart based on the vegetation coverage and visibility in a given area. The field director will ensure that transect spacing is adequate to visually identify any potential historic properties within the survey area. In areas with greater visibility, wider transect spacing is appropriate, but shall not exceed 15 meters. In areas with more dense vegetation and less visibility, narrow transect spacing is appropriate. In all cases personnel must ensure that adjacent transects are similarly spaced to reduce the possibility of missing potential historic properties. The field director will describe all transect survey methods and surveyed areas in the report of survey.

If a potential archaeological historic property is found during a pedestrian survey, archaeologists will document the property using written descriptions, photographs and measurements and will create a plan map illustrating the property boundary, the location of features and artifacts within the property, the general topography, and the relationship of the property to any other sites, buildings, objects or reference points in the area. Archaeologists will capture appropriate geographic information with a GPS, including the site boundary and the location of any artifacts, features, and relevant reference points on the landscape.

As specified in Army Regulation 200-1 Chapter 6-4, the U.S. Army policy is to limit the amount of archaeological material remains permanently curated by reserving such treatment for diagnostic artifacts and other significant and environmentally sensitive material that will add important information to site interpretation. Accordingly, USAG-HI will not collect surface artifacts unless the field director determines a significant diagnostic or environmentally sensitive artifact is in danger of loss or damage, or if the field director determines that field documentation is insufficient to capture the associated information. The field director shall ensure that any artifacts that are not collected are described, measured, and photographed in the field.

The field director and the USAG-HI Cultural Resources Manager (CRM) will determine if subsurface testing is necessary to properly evaluate a potential historic property for NRHP eligibility. Subsurface testing may result in removal of archaeological artifacts from their buried context. USAG-HI will collect all artifacts encountered during subsurface testing. USAG-HI will store all collected material and associated records at the USAG-HI Cultural Resources curation facility on Schofield Barracks in accordance with the requirements of 36 CFR Part 79.

Appendix F - Cultural Resource Identification and Evaluation

Appendix F – Cultural Resource Identification and Evaluation

If potential architectural historic properties are identified during a pedestrian survey, architectural historians will capture geographic information with a GPS, and shall document the property with written descriptions, photographs, and measurements as appropriate.

USAG-HI acknowledges that Native Hawaiian organizations possess special expertise in assessing the eligibility of properties to which they attach religious and cultural significance. All potential historic properties will be treated as if they are eligible for the NRHP until determinations of eligibility have been completed in consultation with the State Historic Preservation Division (SHPD) and Consulting Parties identified in Appendix H. The process for reporting on identification efforts and consulting on adequacy of those efforts and the NRHP eligibility of potential historic properties is specified in Stipulation II.B.1(b) and described below.

If no potential historic properties are identified during these efforts, USAG-HI shall prepare a report of identification efforts and shall send it to SHPD and Consulting Parties. Those parties shall have 30 days to review and provide comments to USAG-HI on the adequacy of identification efforts.

If potential historic properties are identified during these efforts, USAG-HI shall prepare a report of the identification efforts and the properties identified and send it to SHPD and Consulting parties identified in Appendix H. USAG-HI shall not include determinations of eligibility in the report of identification efforts and shall not make determinations of eligibility until after consulting with SHPD and Consulting Parties. USAG-HI shall invite those parties to comment on the adequacy of identification efforts and consult on NRHP eligibility of potential historic properties identified during those efforts. The consultation period shall be at least 45 days. Depending on the level of interest expressed by SHPD and Consulting Parties, consultation may involve face-to-face meetings, site visits, or simply accepting written comments.

After conducting face-to-face consultation if requested, but no less than 45 calendar days after distributing the report of identification efforts to SHPD and Consulting Parties, USAG-HI shall conclude the consultation. USAG-HI shall make determinations of NRHP eligibility by taking into account the views of the SHPD and Consulting Parties, considering the applicable aspects of integrity, and applying the National Register criteria found in 36 CFR § 60.4. USAG-HI shall summarize the results of consultation and transmit the summary with the determinations of eligibility to SHPD and Consulting parties. If SHPD or consulting parties do not agree with the USAG-HI determinations of eligibility, the parties shall follow the process defined in 36 CFR §800.4(c)(2) to resolve the issue.

Appendix F - Cultural Resource Identification and Evaluation

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix G – Post-Review Discoveries

If any potential historic properties (including graves, human skeletal remains; petroglyphs or pictographs; artifacts such as tools, weapons, bottles, shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, walls, terraces, or other constructed features; any physical remains of habitation, agriculture, or other human activities older than 50 years) are found during a training action or related activity, the Officer-In-Charge or other responsible individual shall cease activity in the area, mark the area to prevent further disturbance, and notify the U.S. Army Garrison, Hawaii (USAG-HI) Cultural Resources Manager (CRM) at 808-655-9709 (office) and 808-929-6657 (mobile). The training action or related activity shall not resume in the vicinity of the discovery until the USAG-HI Garrison Commander provides written authorization.

The CRM shall dispatch a team, including an archaeologist and other appropriately qualified personnel, to investigate the discovery. All identification, evaluation, and treatment efforts shall be conducted under the supervision of personnel who meet applicable professional qualifications. Agency personnel who conduct identification, evaluation, or treatment of potential historic properties shall meet the qualification standards established by the Office of Personnel Management for their respective disciplines in accordance with Section 112 of the NHPA (54 U.S.C. 306131). Contractors who conduct identification, evaluation, or treatment of potential historic properties on behalf of USAG-HI shall meet Secretary of Interior's Professional Qualification Standards for their respective discipline (36 CFR Appendix A to Part 61), or shall work at the direction someone who meets those standards.

The discovery team will examine the discovery and the surrounding area to determine if the discovery warrants formal documentation as a potential historic property.

If the discovery is not a potential historic property (i.e. a modern or natural occurrence), the CRM shall provide a memorandum to the USAG-HI Garrison Commander recommending resumption of the undertaking.

If the discovery is a potential historic property, the team shall document the property using written descriptions, photographs and measurements as appropriate and will create a plan map illustrating the property boundary, the location of features and artifacts within the property, the general topography, and the relationship of the property to any other sites, buildings, objects or reference points in the area. The team will capture appropriate geographic information with a GPS, including the site boundary and the location of any artifacts, features, and relevant reference points on the landscape.

Appendix G – Post-Review Discoveries

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix G – Post-Review Discoveries

USAG-HI shall notify State Historic Preservation Officer (SHPO) and Consulting Parties identified in Appendix H about the potential historic property discovery by email or letter within five (5) business days and in that notification shall propose a consultation meeting with the SHPO and Consulting Parties within 30 days to discuss National Register eligibility and develop a management plan specific to the nature of the discovery, if necessary. The USAG-HI Garrison Commander shall decide if the undertaking may resume in the vicinity of the discovery based on the consultation and any resulting management plan.

Any newly-discovered potential historic property will be treated as an eligible historic property until USAG-HI consults with the SHPO and Consulting Parties on National Register eligibility and resolution of adverse effects as applicable. USAG-HI shall create a report of the discovery and the subsequent consultation and shall provide it to the SHPO and Consulting Parties identified in Appendix H for review. USAG-HI shall include the discovery for the Stipulation IV.G. report.

If osteological materials are identified as part of the discovery, the discovery team shall shade the materials from exposure to the elements, protect them from further disturbance, and mark the area for avoidance. Qualified personnel with appropriate osteological education or experience will determine if the materials are human skeletal remains. The CRM shall ensure that determinations about osteological materials are commensurate with the level of expertise on staff at a given time. If a determination cannot be made with certainty by available personnel, the CRM will seek a determination from a forensic anthropologist, professional osteologist, or other appropriate specialist.

If the osteological materials include human skeletal remains, the CRM will contact Army Criminal Investigation Division (CID). If CID determines the discovery is not a criminal matter, the CRM will assess the antiquity and/or cultural affiliation of the remains based on the context and any associated material. If the antiquity and/or cultural affiliation of the human skeletal remains cannot be positively determined without destructive analysis, Native Hawaiian affiliation will be presumed. USAG-HI will not conduct or authorize any destructive analysis unless and until all National Historic Preservation Act (NHPA) and Native American Grave Protection and Repatriation Act (NAGPRA) consultation requirements have been fulfilled and such analysis is a requirement resulting from those consultations.

If the discovery includes Native Hawaiian human remains, funerary objects, sacred objects, or objects of cultural patrimony, USAG-HI will coordinate with the Army National Military Cemeteries staff and will follow the procedures for inadvertent discoveries

Appendix G – Post-Review Discoveries

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix G – Post-Review Discoveries

specified in the implementing regulations of the Native American Graves Protection and Repatriation Act (NAGPRA) at 43 CFR § 10.4.

Activities in the vicinity of discovered human skeletal remains shall not resume until written authorization is provided by the USAG-HI Garrison Commander.

If osteological materials are determined to be faunal remains, the CRM shall determine whether they are related to a potential archaeological historic property and shall document the material accordingly. If the CRMN determines that the faunal remains constitute natural or modern occurrence, and are not part of an archaeological site, the CRM will remove and dispose of the materials to prevent confusion in the future.

Appendix G – Post-Review Discoveries

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O'ahu, Hawai'i

Appendix H – Consulting Parties

Of the 80 organizations and individuals invited to consult in the development of the Programmatic Agreement for Routine Military Training Actions and Related Activities at U.S. Army Training Areas on O‘ahu, the following have participated in consultation and are considered to be consulting parties to this agreement:

- Aha Kūkaniloko
- DAWSON Corporation
- Hawaiian Civic Club of Wahiawā - Kūkaniloko
- Kawaihāpai ‘Ohana
- O‘ahu Council of the Association of Hawaiian Civic Clubs
- Office of Hawaiian Affairs
- ‘Ohana Ho‘ohuli
- ‘Ohana Kaleiopu‘u
- ‘Ohana Keaweamaahi
- ‘Ohana Quitevis

The signatories and consulting parties may agree to modify this appendix by adding or removing consulting parties if requested. If any party wishes to be added or removed as a consulting party to this agreement, they shall submit a request and justification in writing to the U.S. Army Garrison, Hawaii (USAG-HI). USAG-HI shall forward the request to signatories and consulting parties and shall consult according to the procedures defined in Stipulation V.B.4.

Appendix H – Consulting Parties

Programmatic Agreement Among U.S. Army Garrison, Hawaii, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Routine Military Training Actions and Related Activities at United States Army Training Areas and Ranges on the Island of O‘ahu, Hawai‘i