



UNITED STATES MARINE CORPS
MARINE CORPS BASE HAWAII
BOX 63002
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MARINE CORPS BASE HAWAII ORDER 1500.9C

From: Commanding Officer
To: Distribution List

Subj: STANDING OPERATING PROCEDURES FOR MARINE CORPS BASE HAWAII RANGES AND TRAINING AREAS (SHORT TITLE: SOP FOR RANGES AND TRAINING AREAS)

Ref: (a) DoD Directive 4160.21-M "Defense Material Disposition Manual," August 18, 1997
(b) NAVSEA OP5 Volume 1, Ammunition and Explosives Safety Ashore
(c) MCO 3500.27D
(d) MCO 3500.72A
(e) NAVMC 3500.81
(f) MCO 3550.9
(h) MCO 5090.2
(i) MCO P5102.1B W/Ch. 2
(j) MCO 5104.1
(k) MARADMIN 111/15
(l) MCO 8020.10
(m) MCO 8025.1
(n) MCBHO 5420.1
(o) MCBHO 6200.3
(p) MCASO 3710.2
(q) TM 43-001-28, Technical Data Sheets for Ammunition

1. Situation. The Commanding Officer (CO) publishes this directive to establish procedures and provide amplifying guidance governing the use of all ranges, training areas, simulators, airspace, and seaspace operated and controlled by Marine Corps Base Hawaii (MCBH), referred to collectively as the MCBH Range and Training Complex (RTC). The MCBH RTC includes the ranges, training areas, and training simulators aboard MCBH, the Marine Corps Training Area at Bellows (MCTAB), the Marine Corps Training Area on Molokai, and the Pu'uloa Range Training Facility in Ewa. This directive does not pertain to facilities controlled by the U.S. Army.

2. Cancellation. Base Order P1500.9B.

3. Mission. To ensure all agencies and units operating within the MCBH RTC understand and adhere to the regulations and procedures contained in this Order.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. This Order consolidates and standardizes the procedures for the effective, efficient, and safe planning, scheduling, and execution of United States Marine Corps (USMC) ground, logistics and aviation training at the MCBH RTC. It also establishes the regulations necessary to

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ensure USMC training is conducted and readiness is maintained while preserving life, equipment, and natural resources. This Order is intended to serve as a reference and index of available training resources controlled by MCBH.

(2) Concept of Operations. All organizations conducting training at the MCBH RTC shall review and incorporate procedures from this Order. This Order provides an overview of each firing range, training area, or asset available for use and describes the authorities and responsibilities of both MCBH (Supporting Commander) and the training units (Supported Commanders). MCBH is responsible for providing, maintaining, and managing the MCBH RTC. It is the training unit's responsibility to plan and conduct training in accordance with the contents of this Order and the references. Communication and coordination are shared responsibilities of MCBH and training units. Unit Commanders will ensure all personnel are familiar with, and adhere to, the contents of this Order and the applicable references.

b. Subordinate Elements Missions. Comply with the intent of the references and the content of this Order.

5. Administration and Logistics

a. Records. created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per SECNAV M-5210.1 and SECNAV Notice 5210 to ensure proper maintenance, use, and accessibility and preservation, regardless of format or medium.

b. Privacy Act. Any misuse or unauthorized disclosure of Personally Identifiable Information (PII) may result in both civil and criminal penalties. The Department of the Navy (DON) recognizes that the privacy of an individual is a personal and fundamental right that shall be respected and protected. The DON's need to collect, use, maintain, or disseminate PII about individuals for purposes of discharging its statutory responsibilities will be balanced against the individuals' right to be protected against unwarranted invasion of privacy. All collection, use, maintenance, or dissemination of PII will be in accordance with the Privacy Act of 1974, as amended (5 U.S.C. 552a) and implemented per SECNAVINST 5211.5F.

6. Command and Signal

a. Command. This Order is applicable to all MCBH, tenant, visiting, joint, international commands, supporting agencies, authorized civilians, civilian group, and those outside organizations requesting to utilize the MCBH RTC.

b. Signal. This Order is effective the date signed.



S. C. KOUMPARAKIS

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Chapter 1

General

1. Scope. This Order is focused on Ranges and Training Areas (RTAs) and associated facilities on the Hawaiian Islands. This order must be used in conjunction with current Marine Corps Orders (MCOs), MCBH Orders (MCBHO) and Standard Operating Procedures (SOPs), and Naval Instructions that govern the use of the numerous live fire ranges, training areas (TAs) and facilities. The MCBH Range Training Complex (RTC), courses, and facilities are under the charge of the base S-3.
2. Purpose
 - a. The primary purpose of this Order is to ensure an effective, realistic, and safe training environment.
 - b. Failure to comply with these regulations may subject the offender to administrative or disciplinary action under the Uniform Code of Military Justice.
 - c. MCBH Mission Statement. MCBH provides resilient and secure training and operational support, facilities, and services within the Indo-Asia Pacific Region to enable the OPFOR to accomplish their assigned mission. The MCBH Range Control Facility (RCF) will provide Range Control and range maintenance services for units training at the Kaneohe Bay Range Training Complex, Boondocker Training Area (BTA), Pyramid Rock Beach Training Area (PRBT) and Marine Corps Training Area Bellows (MCTAB). The mission of the Pu'uloa RTF is to conduct marksmanship training for permanent personnel assigned to units stationed aboard MCBH and other local units as directed by the CO, MCBH.
3. Acronyms and Definitions. A list of acronyms and definitions used within this Order can be found in Appendix A.
4. Directives. MCO 3570.1 series Range Safety, establishes the minimum requirements to serve as the Officer In Charge (OIC) and Range Safety Officer (RSO) of a training exercise/event. This Order prescribes general safety precautions for the firing of ammunition and explosive ordnance while training, operating ranges, and conducting ordnance clearing projects. This Order is the cornerstone publication which dictates procedures on all U.S. Army/USMC RTAs. Using unit OICs and RSOs will be thoroughly familiar with current editions of AR 385-63/MCO 3570.1 series, TM, applicable Safety of Use Memorandums (SOUM), and this Order while conducting training on MCBH controlled RTAs.
5. MCBH Range Control. Range Control is located on MCBH in building 1584. The RCF is the command and control node for MCBH range and training area operations. The RCF will be appropriately staffed to facilitate training units' activities aboard MCBH, Kaneohe Bay outlined in this order. A minimum RCF shift shall consist of a qualified Fire Desk Operator, Range Safety Specialist and a Range Inspector (RSI). If at any time RCF manning falls below that minimum requirement, training operations will cease and units will prepare to leave the RTAs. Morning and midday shifts are additionally

staffed appropriately to support the increased level of training occurring throughout the RTAs.

6. Responsibilities

a. A variety of parties have important responsibilities to ensure that training conducted on MCBH RTAs is conducted in a safe and appropriate manner. All involved parties must adhere to the responsibilities highlighted in this Order.

b. The Installation CO is the deviation authority in accordance with (IAW) paragraph 3-1, of AR 385-63/MCO 3570.1 series. The CO is responsible for establishing a range safety program.

(1) The requirement that personnel are held accountable for range and explosive safety to the same extent that they are held accountable for mission accomplishment.

(2) Integration of safety and Risk Management (RM) into planning and all subsequent phases of range operations.

(3) Active and coordinated involvement of trained and qualified Range Control/Safety professionals.

(a) Routinely monitor units during training.

(b) Establish an operational Range Control organization.

(c) Appoint a qualified installation RCO.

(d) Develop an installation-level range regulation and/or SOP.

(e) Develop a safety SOP for range clearance operations using the RM process and the requirements of DODD 4715.11 and DODD 4715.12.

(f) Withdraw or suspend installation training complex privileges for willful violation of installation range requirements.

(g) Ensure that incidents or accidents involving weapons or ammunition with firing units are reported and investigated.

(h) Establish a medical support SOP for all range operations.

(i) Establish a central Point of Contact (POC) for coordination and review of Surface Danger Zones (SDZs).

1. Prohibit unauthorized persons from entering range/training areas and impact areas.

2. For those individuals authorized access to areas known or suspected of containing Unexploded Ordnance (UXO), provide appropriate explosives safety training, UXO identification, and procedures to be taken if UXO is encountered.

(j) Restrict authorized access to areas known or suspected of containing UXO to personnel trained in UXO identification and procedures to be taken when UXO is encountered. When access to areas known or suspected of containing UXO is required, provide personnel authorized access with qualified escorts, such as Explosive Ordnance Disposal (EOD) qualified personnel. Medical support personnel (Corpsman, Medic, or EMTs) are also required to be on the facility prior to anyone accessing the high hazard impact area.

(k) Maintain permanent records of all munitions expended, to include an estimated dud rate, by type, quantity, location, and using organization. This includes all UXO clearance operations or EOD incidents conducted on the range and ensure, to the maximum extent practical, that targets placed on ranges do not contain hazardous materials (such as petroleum, oils, lubricants, radium dials, and batteries).

(l) Establish safe and practical methods for recycling or disposing of range residues, IAW DODIM 4160.21.

(m) Ensure that range residues, to include cartridge cases, ordnance derived waste, and targets do not contain ammunition, explosives, or other dangerous articles prior to release from Department of Defense (DoD) control.

(n) Prohibit controlled burning of vegetation on ranges as a method to clear UXO. Prescribed burns may be used to control dense brush or undergrowth or clear a range of vegetation to make UXO clearance operations safe for personnel conducting the clearance operation. In addition, the Installation CO will consider prescribed burns at the Kaneohe Bay RTF and MCTAB as an option for fuel management (not UXO removal), in accordance with the Integrated Natural Resources Management Plan (INRMP), the Wildland Fire Management Plan, National Wildland Coordinating Group standards, and additional National Environmental Policy Act documentation. The personnel conducting the burn must be properly qualified. All these regulations governing wildland fires (controlled or not) on USMC installations are spelled out in detail in MCO 5090.2, Volume 11.

(o) Ensure procedures are in place that allow prompt response to a release of military chemical compounds (chemical agents, chemical smoke, riot control agents, etc.) or other hazardous materials used for training, or to a substantial threat of a release on or off range when such a release poses an imminent and substantial threat to human health or the environment.

(p) Establish and implement all feasible access controls to deter unauthorized access.

(q) Establish and conduct an aggressive education program for all installation personnel, their families, and the general public on the dangers of dud ammunition and other UXO.

c. RCO. The RCO shall be appointed in writing by the CO and shall:

(1) Coordinate and enforce RTC safety.

- (2) Coordinate emergency response within the RTC.
- (3) Coordinate EOD to include regularly scheduled quarterly sweeps.
- (4) Participate in training mishap investigations.
- (5) Provide and conduct installation range safety training.
- (6) Provide personnel briefs.
- (7) Ensure inspections are completed.
- (8) Schedule the RTAs using Range Facility Management Support System (RFMSS). This includes receiving, processing, integrating, prioritizing, coordinating, de-conflicting, and approving all RTA requests.
- (9) Publish notices, reports, and utilization data.
- (10) Control personnel and vehicle movement and access.
- (11) Ensure compliance with physical security measures. Range Control measures and other RTC regulations are provided for the safety of personnel and protection of government property. Through regular patrols, Range Control personnel will ensure compliance with those measures and regulations. MCBH Range Control may recommend the revocation or suspension of RTC privileges or OIC/RSO certification of any person, organization, agency, or club that willfully violates established policy, or whose conduct is incompatible with the safe use of installation facilities.
- (12) Provide and coordinate RTA communications with Range Control.
- (13) Ensure adequate range maintenance is sustained.
- (14) Prepare range deviations for approval and ensure that ranges are certified and re-certified.
- (15) Conduct range inventories/inspections.
- (16) Coordinate research, development, test, & evaluation relating to RTAs.
- (17) Coordinate special events.
- (18) Develop and update SOPs and RTC regulations

d. Training Commands

(1) Tenant and non-tenant commands will ensure compliance with this Order, directives in the MCO 3570 series, applicable technical manuals (TM), field manual (FM), and Marine Corps Warfighting Publications (MCWP), applicable SOUM, installation range guidance, and applicable SOP for safe training and firing for each weapon system within the command.

(2) Units will provide a Command Authorization letter (Appendix B) from the CO (O-5 level or above) for an OIC and RSO for all RTA operations. O-4's may sign this letter with a valid Assumption of Command letter. The command authorization letter can be delegated by appointing a live fire safety officer in writing. Units that choose to appoint a live fire safety officer will provide the appointment letter to the Installation RCO. Units that choose not to appoint a live fire safety officer must submit the command authorization letter signed by the commander. By direction is not authorized. The OIC will sign for and be responsible for the facility or area. The RSO is responsible for the safe execution of all training activities. The OIC and RSO shall be briefed by Range Control on MCBH range, safety, and environmental regulations prior to the commencement of training. An OIC/RSO Checklist can be found in Appendix C.

(3) RM. Develop RM procedures for all phases of training events. A typed written RM worksheet signed by the OIC and RSO must be on hand during all training activities.

(4) Units must receive a safety brief from the designated RSO prior to beginning training activities in all RTAs. MCBH Range Management provides monthly RSO classes required for designation as a MCBH OIC/RSO. The OIC, RSO, and appropriate medical support, depending on the training activity, are required to be onsite during any training event.

(5) Coordinate with Range Control for pre-training brief, post training inspection and range/facility checkout. Units are responsible for the TA or facility until cleared by Range Control.

e. Training Unit Commanders. The Training Unit Commander is responsible for the overall safe conduct of training and compliance with this Order and all applicable orders. Unit Commander duties are:

(1) Designate an OIC and or a RSO for all training events in accordance with the provisions listed in Figure 1-1 in accordance with reference (g).

(2) Appoint an OIC who will be present during training. OICs must physically check in with Range Control prior to scheduled start time. The OIC must be familiar with every aspect of this Order.

(3) Ensure all designated OICs/RSOs satisfactorily complete the mandatory OIC/RSO brief given by MCBH Range Management, to include classroom instruction.

(4) Ensure all designated OICs have performed/possess the following:

(a) Completed and current MarineNet Range Safety Course (Basic), which shall be noted on the OIC/RSO certification letter.

(b) Individual competence in the performance of assigned training and safety duties.

(c) Weapon systems knowledgeable to include specialized training, which will be noted on OIC/RSO certification letter. Categories include;

Basic Range Safety (small arms, machineguns, rockets, grenades, grenade launchers 60 mortars, anti-armor rockets) Demolitions, HRST/TRST, MCWIS, CBRNE, etc.

(d) A complete understanding of the plan for the exercises and training events.

(5) Ensure all designated RSOs have performed the following:

(a) Completed and current Marine Net Range Safety Course (Basic), which shall be noted on the OIC/RSO certification letter.

(b) Individual competence in the performance of assigned training and safety duties.

(c) Qualified on weapon systems and specialized training, which will be noted on OIC/RSO certification letter Basic Range Safety (small arms, machineguns, rockets, grenades, grenade launchers 60 mortars, anti-armor rockets) Demolitions, HRST/TRST, MCWIS, CBRNE, etc.

(6) Medical Support Requirements. For non-live fire maneuver training, Commanders (O-5 or above) will use the risk assessment process to determine the level of medical support necessary for that training exercise. If the Commander determines that medical support is not required, that must be documented on the Deliberate Risk Assessment Worksheet and presented at Range Control during training area check out.

f. OIC

(1) OIC Qualifications

(a) OICs rank requirements are per Figure 1-1/reference (g). For unit training activities not involving munitions, external non-organization support, high risk E-5s, or GS-6s may serve as OICs (RSO not required). Contractors may not serve as OICs.

(b) OICs will be weapons systems knowledgeable. For weapon systems equipped with, or dependent on lasers, the OIC will be knowledgeable of laser hazards and proper employment. The OIC holds responsibility and accountability for the conduct of the activity and adherence to governing regulations and guidance. The OIC must be able to fully influence the conduct of the event. For aviation weapon systems, the OIC must be aviation weapon systems knowledgeable.

(c) The OIC must have satisfactorily completed a Range Safety Certification program. Unit Commanders are responsible for establishing and maintaining a certification program for their OICs and RSOs commensurate to the assigned duties and responsibilities.

Medical Support Requirements for Live Fire and Training Areas			
Category	Description	Minimum Capabilities	Allowed Training Coverage
	Combat Life Saver	Patient assessment Basic First Aid Basic Airway Management Cardiopulmonary resuscitation	Any training not involving live fire. Exceptions: Dive Ops, Para Ops, HRST Ops
	Emergency Medical Technician (EMT)-I All Corpsmen or Medics	Patient assessment Advanced first aid Use of adjunctive breathing aid & administration of oxygen Resuscitation Transportation of ill & injured persons Manual Defibrillation Endotracheal intubation (ET) Esophageal-trachea airway device	Cat-1 Coverage Dive Ops, Para Ops, HRST Ops Static Fire of Small Arms (.50 caliber & below)
3	EMT-II All Corpsmen or Medics	All EMT-I skills Electrocardiogram (EKG) monitoring Defibrillation & Cardioversion Anti-shock trousers Intravenous infusion Esophageal airway Obtain venous blood Nine medications Laryngoscope Gastric suction	Cat-2 Coverage Any High Explosives or Demolitions Any Fire & Movement/Maneuver Any Closed Quarters Battle (CQB)/ Infantry Training Battalion Training
	Paramedic Special Ops Corpsmen Medics Independent Duty Technician	All EMT-I and IIs skills and medications Laryngoscope • ET (adults, oral) • Glucose measuring • Valsalva's Maneuver • Needle thoracostomy and cricothyroidotomy • Nasogastric intubation (adult) • 21 medications	
Figure 1-1			

(d) IAW AR 385-63/MCO 3570.1 series, the Range OIC must be designated in writing by the unit's Battalion/Squadron Commander (O-5 or above) and submitted to MCBH Range Management. Prior to arrival, all Range OICs must complete the Range Safety Course (Basic), and submit a copy of their certificate to MCBH Range Management. The memorandum must include the

name(s) of Range OICs and RSOs and their rank. The memorandum should be emailed or sent to MCBH Range Management. Only those individuals on the unit's certification roster may serve as the OIC. All O-5 memorandums will be valid for three years or until a change of command has occurred. Incoming commanding officers will be allowed 90 days from the date of appointment to re-validate the memorandum. In the event that an acting Battalion/Squadron Commander (temporary duty assignment) signs the OIC's certification memorandum, the memorandum must be accompanied by the assumption of command orders.

(2) Range OIC Duties

(a) Be present to ensure the overall safe conduct of training and proper use of the installation training complex.

(b) Receive a range brief from installation Range Control on use of the assigned range or training area.

(c) Ensure the RSO is physically present at the training site.

(d) Determine when it is safe to fire, IAW applicable regulations and installation range requirements.

(e) Ensure receipt of final clearance to fire from Range Control.

(f) Ensure proper supervision of personnel performing misfire, hang-fire, and cook-off procedures.

(g) Ensure required communications are established and maintained.

(h) Ensure safe laser operations.

(i) Ensure ammunition and explosives are properly handled, transported, stored, and accounted for within the training complex from the time of receipt to the time of expenditure or turn-in.

(j) Ensure a written log is maintained of pertinent safety and control data concerning the operation of firing ranges, weapons training facilities, maneuver areas, authorized operating times, impact areas entries and exits, and cease-fire authorizations.

(k) Ensure plans for firing exercises and maneuvers are coordinated with Range Control.

(l) Ensure control of target areas to prohibit entry by unauthorized personnel.

(m) Ensure all ammunition malfunctions and accidents are reported to Range Control IAW MCO P5102.1 and MCO 8025.1.

(n) Ensure coordination and approval has been gained from Range Control for all civilian personnel that will be entering the training site.

(o) Brief the RSO on the duties to be performed in support of the training event. Clearly establish the requirement for the RSO to brief the Range OIC on the safety of the facility and unit, and the readiness to commence live-fire operations prior to the start of firing.

(p) Implement RM in all phases of the training events.

(3) Prior to Firing the Range OIC will:

(a) Physically check out the assigned range(s) from Range Control prior to scheduled start time.

(b) Assume responsibility for the scheduled range, related airspace, and training facility.

(c) Receive a briefing from Range Control on conditions or events that may affect range utilization.

(d) Certify that all pertinent range and safety regulations have been read, understood, and are complied with.

(e) Sign for all ammunition and explosives with the appropriate DOD Identification Code (DODIC) authorized for use in the scheduled training event. Ensure all ammunition has been inspected prior to and after usage.

(f) In accordance with the Commander's risk assessment, ensure appropriate medical support and safety vehicle are present with the unit and that all personnel are wearing proper safety equipment. All live fire activities require on site medical support. Commanders (O-5 or above) may determine the level of medical support necessary for non-live fire training.

(g) Ensure that the impact area or range is clear of all personnel and that all safety measures directed by this order have been taken (e.g., use of barriers, posting of range gate guards when necessary to deny access to the range/impact area).

(h) Ensure that two means of communications are utilized between the unit conducting training and Range Control (e.g., AN/PRC-119, and MCBH black or green gear). The responsibility for proper communications with Range Control rests with the training unit. Handheld radios can be drawn from Range Control to meet this requirement. If a cell phone is to be used, it will only be used as a secondary communication method and a connection must be able to be established from Range Control to the cell phone.

(i) Ensure that radio checks are made to Range Control every hour. When in a "cold" status, the OIC will send a situation report to Range Control and continue to monitor the Range Safety Net. During non-firing training exercises, situation reports will be sent to Range Control every two hours or when displacing. Range Control can be reached on the Range Safety Net. Training units will establish and maintain their own internal communications for all non-training/safety-related radio traffic. MCBH will provide radios for guards mandated by Range Control.

(j) Ensure ammunition and explosives are properly handled, transported, stored, and accounted for within the training complex from the time of receipt to the time of expenditure or turn-in IAW appropriate service level directives.

(k) Ensure plans for firing exercises and maneuvers are coordinated with the MCBH RCO. The OIC will coordinate with Range Control, and units using adjacent ranges or facilities to ensure safe conduct of training. De-confliction of airspace with the air detachment or any aircraft on station will be conducted with the assistance of the unit Air Officer.

(l) Implement RM in all phases of the training exercises. The OIC will have a detailed RM worksheet signed by the Unit Commander that covers all phases of training to be conducted prior to checking out the range. The RM worksheet can be found in Appendix E. Event RM must be made available upon request to MCBH Range Safety personnel.

(m) Obtain clearance from Range Control to go "HOT" and notify Range Control when going "COLD".

(4) During firing, the Range OIC will ensure:

(a) All ordnance impacts are observed to ensure projectiles land within the prescribed impact area. Firing will be stopped immediately and Range Control notified if ordnance lands outside of prescribed impact areas.

(b) The impact area is constantly observed and controlled to ensure that it remains clear.

(c) Firing is stopped immediately when any unsafe act is observed, reported, or suspected.

(d) All accidents, injuries, or fires, regardless of severity, are reported immediately to Range Control.

(5) In the event of serious injury or death, the Range OIC will call an immediate "CEASE-FIRE" and will:

(a) Ensure medical aid is rendered.

(b) Contact Range Control and report the location, nature and category of the accident, and assistance required. If an evacuation is required, the senior service member from the training unit will be the on-scene commander and will coordinate with Range Control for the Medical Evacuation (MEDEVAC)/Casualty Evacuation (CASEVAC).

(c) Preserve the range for accident investigation.

(d) Fill out an Injury Report (Appendix F) and provide a copy to Range Control within 24 hours.

(e) In the event of a non-serious injury or near miss that could have resulted in a serious injury, the OIC will ensure that corrective action is taken to prevent the incident from happening again.

(6) After firing, the Range OIC will ensure:

(a) All weapons have been cleared and a notification of going "cold" is given to Range Control.

(b) An accurate count and type of all munitions expended is maintained, and count turned in to Range Control upon completion of the exercise.

(c) The area is policed before leaving. Ensure all brass, cartridge cases, and reusable containers are removed from the range and returned to the appropriate facility.

(d) All safety equipment and checked out items are returned to Range Control.

(e) Required paperwork associated with range utilization is completed and turned into Range Control.

(f) All checkout procedures are completed with Range Control and responsibility for the facility is relinquished.

(g) Schedule a daylight clear with Range Control when training concludes during hours of darkness.

g. RSO

(1) RSO Qualifications

(a) RSO rank requirements are defined in Figure 1-1 reference (g). For unit training not involving munitions, external non-organic support, or high risk, RSO is not required.

(b) Weapon system qualified.

(c) Certification of satisfactory completion of unit and installation range safety certification program.

(d) IAW AR 385-63/MCO 3570.1 series, all RSOs must be designated in writing by the unit's Battalion/Squadron Commander (O-5 or above) and submitted to MCBH Range Management. Prior to arrival, all RSOs must complete the Range Safety Course (Basic) and submit a copy of their certificate to MCBH Range Management. The memorandum must include the name(s) of Range OICs and RSOs and their rank. The memorandum should be e-mailed or sent to MCBH Range Management. Only those individuals on the unit's certification roster may serve as the RSO. All O-5 memorandums will be valid for three years or until a change of command has occurred. Incoming commanding officers will be allowed 90 days from the date of appointment to revalidate the memorandum. In the event that an acting Battalion/Squadron Commander (temporary duty assignment) signs the Range OIC's certification memorandum, the memorandum must be accompanied by the assumption of command orders.

(2) RSO Duties

(a) Receive a range brief from Range Control on use of the RTAs.

(b) Weapons and personnel are properly positioned prior to training commencing.

(c) Authorized ammunition and explosives, to include proper charge, fuse, and fuse settings, are used. The ammunition authorized for use on MCBH RTAs can be found in Appendix G.

(d) Firing settings and weapons systems are within prescribed safety limits and verified.

(e) SDZ(s) is/are clear of all unauthorized personnel. Identify all "NO-FIRE" areas to all participants. Examples of NO-FIRE areas are water cannons, range signs, Puuloa impact area wall, and the wild life management area.

(f) Proper hearing protection is worn by personnel within noise hazard areas.

(g) Proper eye protection is worn by personnel within eye hazard areas.

(h) Permission to commence training and live-fire operations is granted by Range Control.

(i) Prior to commencement of live-fire operations, the RSO will conduct final coordination with the Range OIC.

(j) Order an immediate "CEASE-FIRE" or "CHECK-FIRE" when any unsafe condition occurs or is suspected.

(k) Be physically present at the training site at all times.

(l) Report all accidents and ammunition malfunctions to the Range OIC.

(m) Verify, upon completion of firing, to the Range OIC that all weapons and weapons systems are clear and safe before allowing the removal of weapons from the firing area.

(3) Prior to firing, the RSO will:

(a) Receive a safety brief from Range Control on RSO duties and specific range regulations.

(b) Conduct a safety brief for all participating personnel covering all applicable range regulations.

(c) Ensure weapons are properly positioned at authorized firing sites as indicated by the Range Tables and overlays.

(d) Brief road guards in their duties and positions, ensure that barriers or gates are properly positioned and that road guards have communication with the RSO as necessary (radio, landline, etc.).

(e) Ensure communication is maintained between the RSO and road guards at all times and communication checks are performed every hour at the top of the hour.

(f) If communication is lost, the range will go into a "CHECK-FIRE" status until communication is re-established.

(4) During firing, the RSO will:

(a) Ensure only authorized weapons or munitions, as indicated on an approved event, are utilized on the scheduled range.

(b) Verify that proper safety data is applied to all weapons systems.

(c) Monitor the communications network at all times. Make radio checks to Range Control and communication checks to road guards every hour.

(d) Order an immediate "CEASE-FIRE" or "CHECK-FIRE" when any unsafe condition is observed or suspected, including loss of communication.

(e) Enforce the safety regulations prescribed in this order.

(f) Ensure the SDZ is clear.

(g) Ensure that personnel wear appropriate safety equipment and hearing protection.

(h) Ensure all ammunition/UXO found on the range are reported immediately to Range Control.

(5) After firing, the RSO will:

(a) Verify that all weapons are safe and cleared.

(b) Assist the Range OIC in supervising police call.

(c) Perform an ammunition inspection on all personnel.

(d) Account for all remaining/expended munitions.

h. Position Safety Officer (PSO). In addition to OIC and RSO requirements, weapons qualified PSOs shall be assigned for all static live fire, live fire and movement, and live fire and maneuver training as follows:

(1) Vehicle weapons system: One PSO for each vehicle.

(2) Crew served weapons on static range: One PSO for every two weapons.

(3) Crew served weapons in a Support by Fire Position: One PSO for each weapon.

(4) Dismounted personnel on static range: One PSO for every four shooter.

(5) Dismounted personnel conducting LFAMs or Live Fire and Movement: One PSO for every four shooters during day time and one PSO for every two shooters during night time.

(6) CQB: One PSO for each active team in a shoot house.

i. Laser Range Safety Officers. All Laser Range Safety Officers (LRSOs) shall complete the LRSO brief prior to supervising the conduct of laser operations. LRSO briefs are scheduled through the installation RCO. Qualified LRSOs must possess copies of, and strictly adhere to, the parameters of currently approved Laser Training Areas when conducting laser operations in the RTA. Laser training is not authorized unless the RTA has been surveyed, documented, and specifically approved by the Laser Systems Safety Officer. Chapter 8 of this order addresses laser training activities in further detail.

j. Safety Requirements

(1) The RCO is responsible for scheduling, daily oversight of land use, training activities, maintenance and safe operating condition of those courses and facilities under their respective control. They also coordinate with other base and tenant organizations to ensure all related facilities are safe, well maintained, and in serviceable condition for training. The RCO will direct the conduct of random inspections on a monthly basis to ensure safe operating conditions are maintained and will coordinate with the Base Safety Officer for quarterly inspections of all courses and facilities. Results of these inspections will be provided to the base S-3 no later than 24 hours following their completion or immediately if unsafe conditions warrant.

Officer-in-Charge (OIC)/ Range Safety Officer (RSO) Appointment Requirements						
EVENT	OIC*1/2/5			RSO*2/3/5		
	OFF	WO	NCO	OFF	WO	NCO
HC Smoke/Riot Control Agents (CS) *6	X	X	E-6	X	X	E-5
CBRN Confidence Training (Gas Chamber)	X	X	E-6	X	X	E-5
AT-4 9mm Tracer Trainer, 9mm Spotting Rifle Shoulder Launched Multipurpose Assault Weapons (SMAW) Not Rocket, Light Anti-Tank Weapon (LAW) Trainer, Light Armored Vehicle (LAV) Brewster, Practice Hand Grenades, All 40mm TP, Laser Devices, Simulators, Trip Flares, Small Arms, Machine Guns, .50 Cal And Below	X	X	E-6	X	X	E-5
Field Artillery	X	X	E-7	X	X	E-6
LFAMs, Combined Arms Live-Fire Exercises, Aerial Gunnery, Air Defense Weapons	X	X	E-7	X	X	E-6

Aerial Gunnery & Air Defense Weapons; Flame-Throwers; Live Hand Grenades, Grenade Launchers, (All40mm HE); Live Mines, Demolitions; Tank & Fighting Vehicle Cannons; Recoilless	X	X	E-7	X	X	E-6
Mortars/USMC	X	X	E-6	X	X	E-5
SRC-1 ITEMS: Javelin/AT-4/Dragon/Stinger RSO REQUIREMENTS NON WAIVERABLE	X	X	E-7	X	X	E-6
Live-Fire Exercises Using Organic Weapons, Squad Company, Battery, and Troops. Direct Fire NON SRC-1 ITEMS: TOW, SMAW & ROCKET MISSILES	X	X	E-7	X	X	E-6
Parachute Ops/(HST) Ops/ Dive Ops (Qualified Instructor)/Rappelling/HRST	X	X	X	X	X	E-4
Training Area/Bch Operations/Training Facilities, Group 1 UAS PIC training (NO Munitions)	NA	NA	E-5	NA	NA	NA
Training Area/ Bch Ops/ Training Facilities (With Munitions)	X	X	E-6	X	X	E-5
Mortars U.S. Army	X	X	E-6	X	X	E-6
Special Effects Small Arms Marking System (SESAMS)	X	X	E-7	X	X	E-6
Steel Reactive Targets (SRT)	X	X	E-7	X	X	E-6
<p>*1 - The OIC shall be of equivalent or senior rank to the RSO. *2 - Marine Corps Community Services (MCCS) activities may be conducted without an OIC, corpsman or safety vehicle as long as a qualified MCBH RSO is present and observing all activities. *3 - Civilian contractors may act as RSOs when approved by the Installation Commander. *4 - OIC and RSO must have been trained in the 2-Chlorobenzylidenemalononitrile (CS) chamber within the past year. An E-4 or above [chemical, biological, radiological, and nuclear (CBRN) MOS 5702/5711] must be present when conducting CBRN training in a gas chamber. *5 - The OIC shall be a field grade officer and the RSO shall be an E-7 or above for all battalion or larger live fire exercises. *6 - When CS is used in outdoor confidence courses, the RSO must have been trained in the CS chamber within the past year. The use of a 5702 CBRN Defense Officer and 5711 CBRN Defense Specialist is not required.</p>						

Table 1-1

(2) TA Checklists will be utilized by the Range and Training Area Management (RTAM) Inspectors and all training units during inspections to record any discrepancies on the grounds or facilities. Discrepancies include, but are not limited to, over-grown vegetation (which reduces necessary visibility for safe use of an event), rocks, concrete, trash, or other items that may result in injury to individual Marines during training. They may involve including loose or broken portions of obstacles or other facilities, and frayed or broken ropes. Assessments of the facilities are subjective; however, any potentially unsafe condition will be considered a discrepancy. The discrepancy will be noted and corrected prior to its use. Training units are encouraged to point out any and all discrepancies immediately. An unsafe obstacle will not, of itself, prevent use of the remaining facilities; however, the specific obstacle or event will not be used until the discrepancy is corrected and certified safe by both the training unit and the designated representative from Range Control. All training units will coordinate with Range Control for an inspection prior to departing the TA. Range Control will inspect all TAs upon completion of training.

(3) The Range Safety Net shall be established for safety and emergency response. The Range Safety Net is for communications with Range Control only.

(4) Range Control will establish and maintain communications capability between the RCF and using units for all training events.

(5) Communications on the Range Safety Net shall not include administrative or logistical communications that could be otherwise communicated. Such communications could interfere with RTC safety and are not acceptable.

(6) Vegetation will be cut as required to ensure safe operations to include target visibility and fire prevention. Removal of vegetation will be to the extent necessary to ensure good visibility in order to prevent injury to personnel conducting training.

(7) Each facility will be cleared of debris and trash upon completion of training.

(8) Repairs (i.e., replacing ropes, tightening bolts, etc.) will be coordinated by the base S-3 and the base S-4, depending upon the course or facility.

(9) The Range OIC will immediately report any damage caused by personnel, vehicles, or aircraft to Range Control.

7. RM. RM shall be employed during all phases of training activities. A RM Worksheet is provided in Appendix E of this document. Risk assessments will be reviewed for all training events. Event RM Worksheets will be made available to MCBH range personnel upon request.

8. Range Restrictions

a. General. Personnel not specifically scheduled to be on ranges or training areas are not authorized.

b. Vehicle Use

(1) Tactical or government vehicles will use secondary (dirt or gravel) roads within TAs whenever possible. The speed limit is 15 miles per hour (mph) for all areas unless otherwise posted. Administrative vehicle traffic should use existing roads and paths to or within the established camp, command post, or bivouac site to the maximum extent possible.

(2) At no time will using unit's privately owned vehicles (POVs) be authorized access into MCBH ranges or training areas unless approved by the MCBH RCO.

(3) Vehicles operating tactically in support of a training objective may transit terrain as dictated by the scenario, providing they do not damage threatened or endangered species habitats, jurisdictional wetlands, or archaeological sites. Vehicles operating in or adjacent to creeks or riverbeds should use existing roads, trails and stream crossings.

(4) Unit commanders are requested to use prudent judgment in the scheduling and conduct of training and exercises, which may result in heavy vehicular traffic.

(5) Amphibious and Tactical Vehicle Operations aboard MCTAB will adhere to the following:

(a) Wheeled vehicles are allowed on Tinker Road. Tracked vehicles must cross Tinker Road at the designated crossing points.

(b) The speed limit for all tactical vehicles is 15 mph. Only unit Motor Vehicle Operator's Certification training may exceed this limit during scheduled training and with appropriate RM.

(c) Tracked vehicles will not pivot-steer on improved surfaces (i.e., roads, tarmac) IOT prevent surface damage.

(d) Within TA 1, all vehicles will use the existing trails to the greatest extent possible, except for unit Motor Vehicle Operator's Certification during scheduled training.

(e) During training/exercises, Tinker Road will not be blocked for a single period greater than 15 minutes when allowing vehicles or troop formations to cross from TA 1 to TA 2, or vice versa. Road guards will be used on both sides of the crossing point or crossing points. If Tinker Road must be blocked for 15 minutes, the closure will be followed by a 10 minute period of open access IOT allow vehicles to proceed to/from the Bellows Air Force Station (BAFS) recreational area.

(f) During amphibious landings (or withdrawals), all waterborne vehicles/crafts will remain within the surveyed portion of the beach identified in reference (h) and Chapter 5 when conducting ship-to-shore movement. The using unit is required to provide Initial Terminal Guidance (ITG). The requesting unit is responsible for ensuring the entrance gates leading to and from the beach are opened and manned at all times during training.

(g) The security of vehicles and equipment is the responsibility of the unit conducting the training.

c. Consent to Search. Commanders of military installations, aircraft, or vessels may authorize personnel to conduct searches of persons or property upon entry to or exit from the installation, aircraft, or vessel. The justification for the search is the need to make sure the security, military fitness, or good order and discipline of the command is maintained. All person(s) and property entering MCBH is subject to search.

d. Alcohol. Alcohol is not allowed on or in RTAs unless approved by the Installation Commander.

e. Targets. Only authorized targets will be emplaced in the RTAs per approval of the installation RCO. Non-permanently installed targets will be removed after completion of training. Steel targets must be used per service level instructions.

9. Range Violations. Violations of this Order or other governing directives will result in the issuance of a range violation. In the event of a violation, all training will be halted until corrective action has been taken, and the offending unit may be required to evacuate the RTAs. Range OIC/RSO privileges may be revoked by the installation RCO based on the severity of the infraction(s). Qualifying infractions include, but are not limited to, accessing RTA without Range Control approval, conducting live-fire operations without Range Control approval, and deviating from RTA SOPs without written approval.

10. Deviations

a. Requests for deviations to the provisions contained in DAPAM 385-63 or MCO 3570.1 shall be submitted to the CO, MCBH no less than 30 business days prior to the planned event.

(1) Deviations are limited to:

(a) Reducing SDZ dimensions when terrain, artificial barriers, or other compensating factors make smaller SDZs safe.

(b) Modifying prescribed firing procedures to increase training realism as appropriate for the proficiency of participating personnel.

(c) Allowing personnel who are not directly participating in the actual conduct of training within the SDZ.

b. Requests for waivers to this Order will be submitted to the installation RCO, 30 days prior to the planned event for the request to be considered. Submission of a request does not translate to permission or automatic granting of the specific request. The RCO or a direct representative will either call or email a response to the waiver within two weeks of receiving the request.

11. Accident Reporting. When a training accident occurs on a range or in a TA, a report will be immediately made to Range Control by telephone or radio, regardless of the severity of the accident.

12. Heat Conditions

a. Heat stress conditions are established by using the Wet Bulb Globe Temperature (WBGT) Index. This Index combines shade, air temperature, radiation, humidity, and wind into a single value to be used as a guide for outdoor activity.

b. When the WBGT Index is measured and a hazardous heat stress condition is established, all units training in RTAs will be notified by Range Control of the heat condition. Heat stress conditions serve as a general guide to the unit commander. However, significant differences in stress conditions may exist between measuring stations and the unit's operating areas.

c. The WBGT Index and related categories are excellent guides for planning activities. However, heat injuries may occur to individuals with

certain medical problems when the WBGT Index is below 80 degrees Fahrenheit (F). Onsite assessments must be made.

d. The Heat Conditions will be passed over the Range Safety Net every time there is a change in the condition. The following are heat conditions and their associated flags with the allowable activities for each condition:

(1) Green Flag. Heat Condition I when the WBGT Index reads from 82 to 84.9 degrees F; heavy exercises for personnel not acclimated should be conducted with caution and under constant supervision.

(2) Yellow Flag. Heat Condition II when the WBGT Index reads from 85 to 87.9 degrees F; strenuous exercises, such as marching at standard cadence, should be suspended for personnel not acclimated in their first two or three weeks. Outdoor classes in the sun should be avoided.

(3) Red Flag. Heat Condition III when the WBGT Index reads from 88 to 89.9 degrees F, all physical training should be halted for personnel whom have not become thoroughly acclimated by at least 12 weeks of living and working in the area. Personnel who are thoroughly acclimated may carry on limited activity not to exceed six hours per day.

(4) Black Flag. Heat Condition IV - when the WBGT Index exceeds 90 degrees F, strenuous activity should be halted for all personnel.

(5) Administrative Black Flag. If Emergency Services (fire department, hospital, ambulance, clinic, etc.) are unable to provide required support due to a lack of resources, an Administrative Black Flag will be put into effect.

e. Any Emergency Service provider may notify Range Control when additional support cannot be provided.

f. Range Control will issue an Administrative Black Flag and cease all training aboard the MCBH RTC. Range Control will lift the Administrative Black Flag upon notification that Emergency Services are available.

13. MEDEVAC Procedures

a. General

(1) MEDEVAC refers to U.S. Army, Navy, Marine Corps, and Coast Guard patient movement using designated tactical or logistic aircraft, boats, ships, and other watercraft temporarily equipped and staffed with medical attendants for en route care.

(2) CASEVAC is the unregulated movement of casualties that includes movement both to and between Medical Treatment Facilities.

(3) POVs are not authorized as emergency vehicles.

(4) It is critical IOT ensure a timely response to training accidents, that the incident details, victim injuries, and assets necessary to best address victim injuries are clearly relayed to Range Control.

b. Precedence. The OIC/RSO or on-scene medical personnel will determine severity of the injured service member. The following priorities should be assigned and passed to the responsible authority when requesting a MEDEVAC/CASEVAC IOT help determine the severity:

(1) Urgent. Evacuation of critically wounded or injured that require early hospitalization. An urgent precedence is a matter of life or death.

(2) Priority. Evacuation of seriously wounded or injured personnel; those who require early hospitalization, but whose evacuation is not a matter of life or death.

(3) Routine. Evacuation of a patient with minor illness.

c. In the event of a life-threatening injury (e.g., gunshot wound, heart attack), the responsible unit will contact Range Control and broadcast the term "RED BLANKET". Range Control will then rebroadcast "RED BLANKET" with available amplifying information. When "RED BLANKET" is broadcasted over the Range Safety Net, all training will cease and units will standby for further guidance from Range Control.

d. MEDEVAC/CASEVAC can be accomplished by contacting Kaneohe Bay Range Control via the range safety nets or by calling (808) 257-3180/(808) 216-7149 or Pu'uloa Range Control at (808) 474-8061/(808) 630-6603.

14. Missing Persons, Search and Rescue

a. Upon notification of a missing person, contact Range Control immediately so they may be prepared to assist. If Range Control is closed or cannot be contacted, contact the Command Duty Officer at (808) 330-9636.

b. The unit will conduct an initial search, ensuring the last known location of the missing person is protected.

c. One hour after loss of accountability, the following information will be submitted to Range Control:

- (1) Unit.
- (2) Name.
- (3) Rank.
- (4) Electronic Data Interchange Personal Identifier.
- (5) Last time seen.
- (6) Grid coordinate or latitude/longitude of last seen location.
- (7) Any equipment the missing person was/is carrying.
- (8) Any other pertinent information.

d. If the unit is off-site (off DOD property) and a request for assistance is received, Range Control will attempt to assist by making contact with the nearest suitable SAR agency and assets. Range Control will assist the responding agency/asset(s) with establishing direct communications with onsite personnel as soon as possible, and will then standby to assist as requested. Onsite personnel will dictate coordination efforts to the maximum extent possible.

15. Emergency Medical Care for Live-Fire and High Risk Training

a. A government vehicle with the capability of accepting a litter with patient will be designated as a dedicated safety vehicle. The Hospital Corpsman/Medic or Emergency Medical Technician (EMT) will remain in the vicinity of the safety vehicle at all times while live-fire is in progress.

b. Prior to the commencement of live-fire, the RSO will check in with Range Control to notify medical support is present ISO training. If the Corpsman/Medic/EMT has to leave the range facility, the range must go "COLD" until the medical support has returned or been replaced. Medical personnel will not participate in training and will not be assigned additional duties while performing medical support for live fire ranges.

c. In the event of an incident which requires emergency evacuation, the following procedures will be followed at Kaneohe Bay RTF:

(1) All firing will cease.

(2) The onsite medical support will make every effort to render the necessary medical care.

(3) The RSO will contact Range Control via the Range Safety Net and request emergency medical support. The RSO will provide the following information to expedite the transport of the patient: name, location, type of injury, age/sex of patient, phone number calling from, and blood type.

(4) The RSO will post a guard at the gate of the training facility to direct the emergency personnel upon arrival at the RTF.

16. Aircraft Accidents. The OIC/RSO will immediately notify Range Control at the Range Safety Net, (808) 257-3180, or UHF 225.20/Alt 227.05 in the event of an aircraft accident on MCBH ranges or training facilities. Range Control will coordinate the appropriate emergency response. For additional information, refer to reference (c), Marine Corps Air Station (MCAS) Order P3710.1J, Air Operations Manual, Crash Bill.

17. Fire Protection

a. The provisions listed in this section shall be adhered to when utilizing any TA aboard MCBH. In addition, Table 1-1 contains important information regarding fire classifications and necessary precautions and restrictions that need to be followed while training at MCBH.

b. Open flames are not authorized, except on designated sites or when specifically approved by the RCO.

FIRE DANGER RATING	CAUTION TO BE EXERCISED	NECESSARY PRECAUTIONS AND RESTRICTIONS
LOW Temp. <70 Rel. Hum 45-60%	Use normal caution.	Normal precautions. No restrictions.
MODERATE Temp. <80 Rel. Hum 30-45%	Use normal caution. Fire will start easily.	Normal precautions. Heat/flame sources limited to cleared areas.
HIGH Temp. <90 Rel. Hum 25-40%	Use extra caution. High ignition hazard; fires start easily.	No heat or flame-producing devices are allowed in field TAs, except field mess kitchens in approved bivouac sites. Smoking is not permitted.
VERY HIGH Temp. >90 Rel. Hum 15-30%	Use extreme caution. Very high ignition hazard. Fires become difficult to control.	No heat or flame-producing devices (pyrotechnics) are allowed in field TAs. Live firing is limited to mandatory qualification only, unless otherwise restricted by RTAM. Smoking is not permitted in all field-TAs.
EXTREME Temp. 90+ Rel. Hum <15%	Use extreme caution. Extreme ignition hazard. Fires nearly impossible to control.	Live-fire is restricted to Mission Essential training (i.e., pre-deployment) only. The use of any other type of live ordnance training, heat, or flame-producing devices (heaters, welders, stoves or open flames) is strictly prohibited. Vehicles should remain on paved roads.

Table 1-2 Fire Classification Chart

18. Emergency Response to Firefighting

a. Situation. Historically, the months of May through September have proven to be the months of least precipitation and therefore, vegetation on ranges becomes dry and extremely flammable, creating the potential for fires to occur. Combining this, with the use of live ammunition of all types at the ranges, increases the risk of igniting a brush fire. Public safety is the primary concern for both on and off-base communities near these RTAs. In addition, the potential adverse environmental impact of the fire hazard during this period is magnified because it coincides with the egg-laying period of the federally protected red-footed booby, a tree nesting seabird whose colony of over 2,000 is located within the KBRTC. MCBH must maintain a condition of readiness that allows for an immediate response IOT quickly control and extinguish fires.

b. Assumptions. Fire ignitions in MCBH ranges are due to the availability of naturally occurring fuels and the nature of military training.

c. Mission. Maintain an aggressive fire prevention program to prevent the start of brush fires on the range and establish procedures to the response of fires that do start.

d. Execution

(1) The key to the success in minimizing the impact of fires is to maintain an aggressive fire prevention program and to reduce the impact of those fires that do start.

(2) The concept of operations for wildland fire management on MCBH TAs and ranges will be conducted in three phases: pre-incident, incident, and post-incident. Pre-incident operations include such tasks as conducting preventive measures during the dry season to prevent fires and providing training and awareness in the prevention of fires. Incident operations covers a coordinated and immediate response and notification to an incident. Post-incident operations covers reporting and after action.

(3) Pre-Incident Tasks. Pre-incident planning is the foundation of an effective fire management plan. It includes all activities intended to reduce the number and severity of fires.

(a) RCO

1. Ensure all regulations and SOPs are adhered to IAW this Order.

2. Ensure fire prevention and environmental briefs are provided before training is conducted.

3. Ensure the Fire Prevention Group (FPG) (Federal Fire Department [Fed Fire], S-3, S-4, MCAS, Military Police Department [MPD] and Base Safety) meets annually at a minimum, or as otherwise appropriate, to assess the following tasks and objectives:

(b) Wildland Fire Manager (RCO)

1. RCO will assess condition of range on a quarterly basis to determine status of the fuel-load (i.e., vegetation cover condition) and opportunities available to reduce fire risk through vegetation removal, suppression, replacement or other means.

2. Ensure all Firefighters are familiar with the terrain, as well as environmental and safety concerns such as the presence of UXOs. At no time will fire fighters enter the high hazard impact area to fight a fire.

3. Ensure special consideration is given in controlling the use of classes of ammunition and pyrotechnics that have higher fire hazards associated with their use and taking measures to mitigate risk. Examples include ensuring fire/fuel breaks are properly maintained, ammunition inspections, no tracers, ensuring smoking materials are handled properly, fire bucket availability, range safety briefings.

4. Ensure projects and equipment are identified and programmed to mitigate the risk of a fire getting out of control (i.e., additional fuel breaks, etc.). Plan and budget for appropriate improvement projects in close coordination with base S-4 to ensure compatibility with

Base facilities and environmental compliance plans, laws and regulations governing activities and uses of range lands and water.

(c) Base S-4

1. When requested by range control personnel, ensure fuel load (i.e., vegetation cover) is maintained to minimize fire risk throughout the year.

2. Encourage booby birds to avoid nesting near high-risk fire areas.

3. Ensure utility infrastructure (fire hydrants, pump house) is maintained and in proper operating condition and that facilities maintenance personnel are aware of their responsibilities during emergency fire response.

(d) Base S-6

1. Ensure range personnel or first responders can communicate with Marine Aircraft Group (MAG)-24 air personnel directly.

2. Be prepared to provide back-up communication.

(e) MCAS, CO

1. During the months of May through September, Meteorological and Oceanographic personnel will provide weather forecasts to the RCO for use in determining fire danger parameters.

2. Upon request from Fed Fire, Aircraft Rescue and Firefighting (ARFF) personnel shall report to the Fed Fire Incident Command (IC), as long as it does not conflict with ARFF's primary mission of supporting Airfield Operations.

(f) All Training Unit Commanders and Managers. Must be aware of, and involved in, fire prevention to ensure compliance with the requirements of this Order and provide support as requested.

(g) Incident Response Team. Public safety is the number one priority when fighting fires at the MCBH RTC. In addition, at no time will any firefighting personnel enter the high hazard impact area.

(h) Base S-3. When notification of a fire is made to Range Control, the following procedures will be initiated by Range Control:

1. Cease all training on the range.

2. The Range Control Operations Officer or Range Control Operations Chief shall assume the duties as Operations Control Coordinator (OCC) until the arrival of Fed Fire and they assume IC. The OCC will notify appropriate coordinating departments (Fed Fire, S-3, MPD) and track the fire using the Fire Report/Communications Sheet, located in Appendix H.

(i) Base Emergency Operations Center/Command Watch Officer

1. Make notification to all other supporting agencies (S-4, EOD, MAG-24, Base Safety) indicated in the Fire Report/Communications Sheet, located in Appendix H.

2. Initially, the OCC will immediately set-up a Command Post (CP) at the RCF then move the CP to Range 5. The IC System will be utilized with a Unified Command (UC) structure, established to include additional support agencies (S-3, S-4, Base Safety, EOD, MPD).

3. All personnel shooting on a range will move back to Range 4.

4. The OCC will appoint range personnel to control all traffic entering and leaving the main entrance to the RTF. The controller will allow only authorized vehicles/personnel to enter (POVs will not be allowed into the fire area or range complex). POVs of site visitors or other agencies will be parked outside of the range complex in the designated parking areas off the main road and no visitors or outside agencies will be allowed to enter until the area is deemed safe by the fire department. In addition, a log of authorized personnel entering the area will be maintained. This will ensure strict accountability of all personnel entering and leaving the fire site.

5. At no time will range personnel attempt to extinguish or fight a fire. Range Control personnel will activate the water cannon fire suppression system if a fire is a potential threat to the Wildfire Conservation Area.

6. EOD and/or Range Control. Will ensure Fed Fire IC is briefed on locations of impact areas and at no time will any firefighting personnel enter the high hazard impact area. During a fire no one is permitted east of the "lollipop"-shaped road in the impact area.

(j) Upon arrival of Fed Fire, designated range personnel will accompany the Fed Fire IC to report back to the CP the status of the fire and any support request.

(k) Fed Fire On-Scene Commander (OSC) will:

1. Report to CP and assume OSC.

2. Ensure public safety is number one priority.

3. Ensure range personnel assigned as liaison are properly briefed on roles, responsibilities, and safety.

4. Ensure effective communications with CP and all support agencies.

5. Request activation of fire bucket support via the Emergency Operations Center (EOC) and establish communication with MAG-24 upon arrival, frequency 379.25.

6. Training aboard the RTF will not resume until the Fed Fire IC has declared it safe to resume training.

7. If Fed Fire believes an evacuation of homes is necessary, Fed Fire will consult with S-3 and EOC prior to ordering an evacuation unless there is imminent threat of life.

8. Ensure the Base CO, or their appointed representative are briefed of the situation and ensure decisions that affect a large number of people such as evacuation orders are briefed immediately to the CP and the UC contributes to the processes of determining objective and strategies.

(l) Military Police Department will:

1. Provide a representative for the CP to coordinate MPD support requests.

2. Facilitate the orderly evacuation of affected areas to designated shelters/locations after receipt of the order to evacuate from the Base Commander or their appointed representative. MPD may initiate an evacuation IOT save personnel in imminent danger.

(m) Post-Incident Tasks. If requested by the RCO, all agencies are required to provide an after action report to the S-3 to identify all issues and recommendations to improve our fire management program in the future. S-3 is required to maintain a copy of this report for up to seven years.

1. A copy of the incident report, no matter how small the fire or duration, will be provided to the Environmental Department, so location and time that fires occurred can be tracked. This information will help meet an annual reporting requirement to Headquarters Marine Corps of the number of installation acres burned by wildfires, per MCO 5090.2.

2. Range personnel will monitor the area via visual and infrared means to ensure there are no flare-ups and to support other follow-on actions that may be required (e.g., installation of erosion controls).

3. Close coordination, communications, and cooperation must be maintained between all staff functions prior to, during, and after a fire to ensure an efficient fire response.

4. On-scene command is Fed Fire.

(n) Fire Report/Communication Sheet. Appendix H contains a Fire Report/Communication Sheet containing POCs that shall be notified in the event of a fire.

19. Fire Prevention Brief. The following verbiage will be included in RSO's general safety, environmental, and fire prevention briefing to be given to all personnel before training aboard the MCBH RTC and Training Facilities:

a. "The purpose of this brief is to educate users about the dangers of fire on the range. Fire prevention is the responsibility of every person

working or training on the range. There are several reasons that fire prevention is so important. Fire poses a grave threat to life and property in adjacent communities and to nearby native plants and animals (such as the red-footed boobies, a federally protected seabird colony). The Base, or individuals, can be charged \$25,000.00 per "take" of a booby bird or other protected species harmed or killed by negligence. Fines and penalties can also be levied on the Base or individuals for fires that damage archaeological features or sites."

b. "If a fire starts, all training must cease and training downtime will result. For these reasons, every effort must be made to prevent range fires."

c. "No tobacco smoking materials will be discarded on the RTA. Open fires are not authorized."

d. "Heat tabs and similar commercial products must be used inside metal containers."

e. "Some pyrotechnics are not authorized for use at MCTAB."

f. "Smoke grenades and grenade/artillery simulators are permitted at MCTAB only after approval has been granted by the installation RCO, MCBH."

g. "In the event a fire has started, cease training and immediately contact Range Control."

20. Destructive Weather

a. Range Control. Range Control will pass all thunderstorm, high wind, and tsunami warnings to units in the RTC. Each unit is required to acknowledge the receipt of the warning by obtaining a radio check with Range Control. Destructive Weather Conditions are as follows:

b. Thunder Storm Conditions

(1) Thunder Storm Condition Two. Thunderstorms are forecasted to occur within 25 Nautical Miles (NM) of the local area. The potential for lightning, hail, low level wind shear, and destructive wind exists in the vicinity of thunderstorms. The movement of ammunition on-base will be severely limited and moved only on a case-by-case basis that must be cleared by the OIC of the Base Ammunition Supply Point (ASP). All live ranges will be put in a "15 minute be prepared to cease-fire and move" status. This means training may continue, but all ammunition and equipment will be stored in a way that it can be packed quickly and moved.

(2) Thunder Storm Condition One. Thunderstorms are imminent or occurring within 5 NM of the local area. The potential for lightning, hail, low-level wind shear, and destructive winds exist on station. All live-fire and training will cease until cleared. All units will take cover to the best of their ability to reduce the risk of exposing personnel to lightning strikes.

(3) Lightning. Lightning is occurring within 10 NM of the area. All live-fire and training will cease until the all clear is sounded.

c. Tropical Cyclone Conditions Of Readiness (TCCOR). TCCOR are set using the applicable term indicating wind force. Conditions of readiness are based on sustained wind speeds of 50 knots or greater.

(1) TCCOR-V. Set from 1 June to 30 November every year.

(2) TCCOR-IV. Destructive winds of 50 knots or greater are possible within 72 hours.

(3) TCCOR-III. Destructive winds of 50 knots or greater are possible within 48 hours.

(4) TCCOR-II. Destructive winds of 50 knots or greater are anticipated within 24 hours. Units should begin planning to evacuate the training areas.

(5) TCCOR-I. Destructive winds of 50 knots or greater are anticipated within 12 hours. Units must evacuate the training area within two hours of receiving this advisory.

(6) TCCOR-IC (Caution). Destructive winds of 50 knots or greater are anticipated within six hours.

(7) TCCOR-IE (Emergency). Destructive winds of 50 knots or greater are occurring.

(8) TCCOR-SW (Storm Watch). Destructive winds are no longer being experienced but winds are still gale force. Damage assessment teams are deployed to develop damage assessment and proposed courses of action for the CO.

(9) TCCOR-R (Recovery). Winds are below 34 knots and the CO has ordered recovery operations to commence.

21. Missing or Recovered Items Reporting. Missing, lost, stolen, or recovered government property shall be reported to Range Control immediately. Property losses frequently occur because regulations relating to proper safeguarding and handling are not followed. Range Control will record the information and determine if follow-up action is required. Range Control will obtain the following information:

- a. Location of incident (grid coordinates preferred).
- b. Date and time of incident reported.
- c. Name and contact information of individual reporting the incident.
- d. Material description to include quantity and types.
- e. Where applicable, National Stock Number and lot number.

f. Where ammunition and explosives are involved, Range Control will advise individuals NOT to remove item(s) for safety reasons and initiate possible follow-on investigatory requirements.

22. Special Military/Civilian Training

a. Foreign Military. Training at the MCBH RTC will be addressed on a case-by-case basis and must be submitted for approval to the RCO. Support information for visiting units regarding MCBH Kaneohe Bay can be found in Appendix I.

b. Civilian Training

(1) Civilian and non-military law enforcement agencies are required to coordinate with RTAM when requesting to train on the MCBH RTC. Written agreements must be established prior to any approved training. A minimum of 60 days' notice is required IOT establish a written agreement.

(2) Contractors wishing to train or conduct operations in the MCBH RTC are not authorized to make initial requests for range access or coordination. Military or government civilian personnel are required to request initial coordination on behalf of contracted personnel supporting government projects. It is imperative that authorized personnel properly coordinate with Range Management if they desire to see projects requiring range support to be accomplished. Typical examples of contracted personnel requesting access without proper coordination include aerial mapping agencies, environmental agencies wishing to conduct surveys, etc. These agencies must have MCBH approval before Range Management will allow access.

(3) Contractors desiring to become RSO qualified will adhere to the provisions contained within this Order.

(4) An Indemnification Agreement and Waiver of Liability (see Appendix J) shall be completed and signed when applicable.

c. Other Service Military Training

(1) Other services and DOD commands/organizations will not be charged for use of ranges, but can expect to reimburse MCBH for support. Units can expect to reimburse MCBH for providing services including but not limited to portable toilets, wastewater removal, trash pickup, civilian overtime, etc.

(2) A complete list of ordnance of all Class V to be expended must be reported to MCBH RCO in advance.

23. Coordinates. All coordinates used in this order are referenced in latitude/longitude and/or Military Grid Reference System (MGRS), IAW World Geodetic System (WGS)-84 Reference Datum.

24. Magnetic Headings/Directions. Unless otherwise stated, all headings/directions used in this order are magnetic.

25. Waivers to Regulations. Changes to provisions contained in this Order should be addressed to the CO, MCBH (Attn: S-3) NLT 30 days prior to the

planned event. It is recommended that waiver requests be coordinated with the RCO in advance of submission. A Waiver Request Format can be found in Appendix K.

26. Points of Contact. The following telephone numbers are provided for reference. The commercial area code for MCBH is (808); the Defense Switched Network (DSN) prefix is (457), unless otherwise noted. Table 1-3 details important POC information for MCBH.

POINT OF CONTACT	PHONE NUMBER
Installation RCO	(808) 257-8884
RSO	(808) 257-8874
RFMSS Scheduler/Functional Administrator	(808) 257-8816
Range Control Operations Officer	(808) 257-2067
Range Control Range Safety Supervisor	(808) 257-4243
MCBH Range Control Fire Desk	(808) 257-3180
Castle Regional Medical Center	(808) 263-5148
Base Safety	(808) 257-1830
Pu'uloa Fire Desk	(808) 474-8061
Modeling and Simulation Division	(808) 257-1110
Command Duty Officer	(808) 330-9636
Table 1-3 MCBH POC Information	

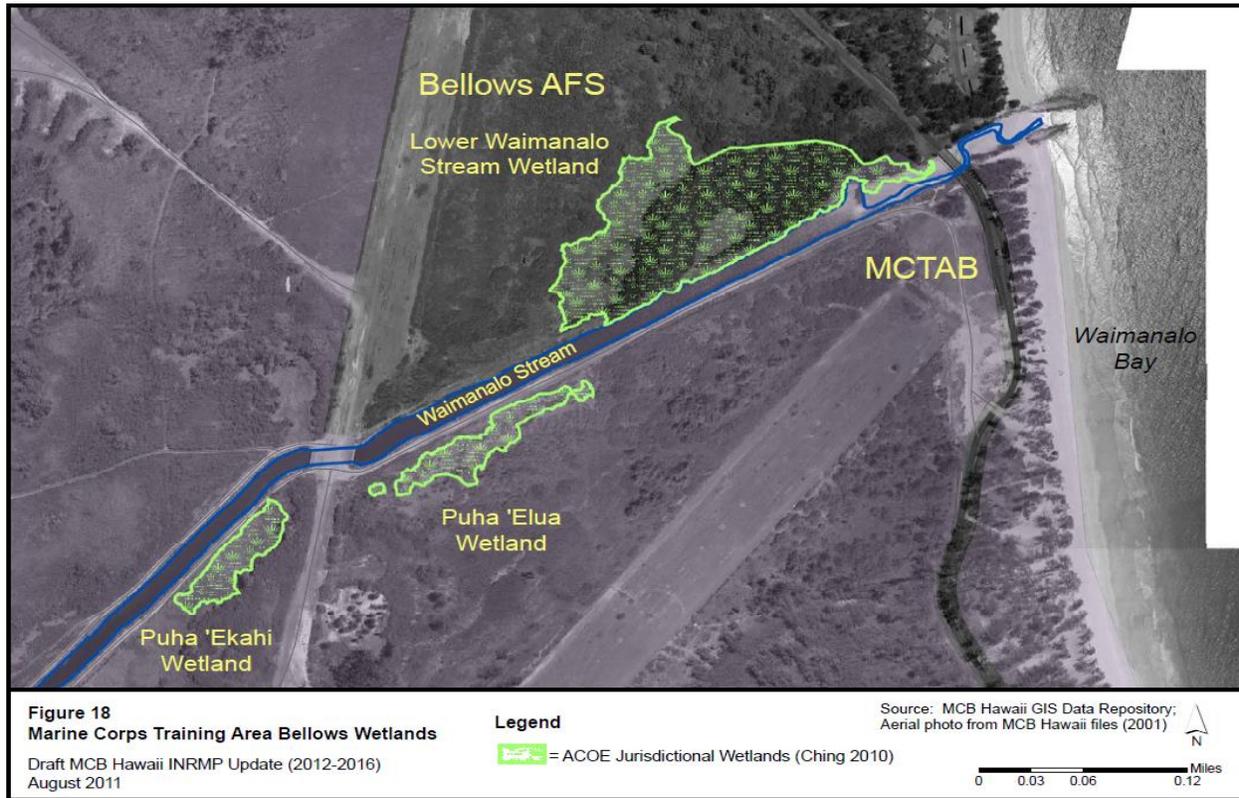


Figure 2-2. MCTAB Wetland Area

Note: Image is not to scale

3. Policies, Plans, and Acts

a. In an effort to preserve the environment, compliance by all users with the regulations and consistency with all relevant plans are required. Some of the most pertinent of these are listed below:

- (1) The National Environmental Policy Act of 1969.
- (2) The Clean Air Act.
- (3) The Clean Water Act.
- (4) The Resource Conservation and Recovery Act.
- (5) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.
- (6) The Endangered Species Act.
- (7) The National Historic Preservation Act.
- (8) The Archeological Resources Protection Act.

- (9) Antiquities Act of 1906.
- (10) The Federal Facilities Compliance Act.
- (11) The Migratory Bird Treaty Act.
- (12) INRMP (required by the Federal Sikes Act and MCO 5090.2.
- (13) Native American Graves, Protection, and Repatriation Act.

b. Cultural and Historic Resources. Federal and state historic preservation laws have been developed to protect our cultural heritage and these laws are enforced on the RTC.

c. Violation of the environmental laws listed above can incur civil and criminal fines and/or incarceration.

4. Environmental Coordination

a. Training exercises not addressed in previous Environmental Assessments or changes in type or intensity of training will require environmental review by the Environmental Department prior to implementation.

b. Amphibious exercises need to be monitored to ensure there are no endangered marine mammals or sea turtles in the area. Contact base Range Control for specific guidance.

c. Should a monk seal or sea turtle be discovered "beached" within any shoreline TAs (e.g., Pu'uloa Craft Landing Zone (CLZ), Fort Hase CLZ, Hale Koa CLZ, Pyramid Rock Beach CLZ, or MCTAB CLZ), all activity within 150 feet must cease. The training unit will immediately notify Range Control via the range safety net or call (808) 257-3180 to notify Range Control about the presence of the animal. Range Control will then notify MCBH Natural Resources section at (808) 257-7000. Disturbing, touching, or harassing an endangered species is a violation of federal law.

d. Any fuel spills or other hazardous material (HAZMAT) related incidents must be reported immediately to Range Control via the range safety net or by calling (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the Environmental Department. Appendix L contains a Hazardous Substance Release/Spill Report.

e. Nu'upia Ponds Wildlife Management Area (WMA). Individual physical training may be conducted in this area on the designated Nu'upia Ponds running trail. Requests for unit runs and hikes around the Nu'upia Ponds WMA must be requested via RFMSS and approval granted by the RCO.

f. Consult the Environmental Department, prior to conducting any earthwork in areas not already approved for excavation or digging operations.

5. Environmental Constraints

a. Activities shall be confined to and conducted within the TA boundaries.

b. Ingress and egress to amphibious landing beaches shall be conducted in such a way to avoid coral and live rock formations/obstructions in accordance with state law.

c. Damage to beach foliage, trees, and shrubbery shall be avoided by transiting on existing roadways and trails.

d. Personnel engaged in a training activity will remain within their designated TA(s).

e. Digging and other ground disturbance is limited to six inches below the existing surface. No fighting holes, bunkers, or trenches may be dug unless approved by the Environmental Department, except in previously approved areas. Removal of sand from beaches or shoreline for any purpose (i.e., filling of sand bags, making sand tables, personal use, etc.) is strictly prohibited.

f. Personnel involved in training activities must park in authorized parking areas.

6. Off-Limits Areas/Prohibited Activities

a. Off-limit areas are defined as portions of MCBH Kaneohe Bay and MCTAB where entry is prohibited unless authorized elsewhere in this manual. All RTAs and facilities are off-limits unless properly scheduled and coordinated with the RTAM office, MCBH.

b. The following areas are off-limits for all training activities aboard MCBH Kaneohe Bay:

- (1) All wetlands areas.
- (2) Areas of historical significance (see Figures 2-1 and 2-2).

c. The following areas are off-limits aboard MCTAB:

(1) Waimanalo Stream is designated as a Fish and Wildlife Conservation Area and is an established wildlife sanctuary. No training is allowed within or adjacent to Waimanalo Stream. A 100 yard buffer zone around the mouth of the stream is also off-limits. If a unit wishes to cross the stream for any reason, it must be coordinated with the RCO.

(2) State of Hawaii or private property and other areas as identified in reference (n).

d. The following activities are prohibited in all MCBH RTC and hiking routes:

- (1) Burying, dumping, abandonment, or otherwise disposing of trash.
- (2) Burying, dumping, abandonment, or otherwise disposing of any type of explosive material, pyrotechnic or chemical ammunition, or any type of hazardous waste.

(3) The draining or spilling of oil, fuel, any other hazardous or regulated substance from vehicles or other machinery, from any container onto the ground, or into the water.

(4) Removal or intentional destruction of plants, trees, brush, or other vegetation. Cutting or otherwise removing tree limbs or large portions of any other plant is also prohibited. Using units will limit camouflage material to previously felled vegetation.

(5) Killing, injuring, or harassing wildlife.

(6) Removal or intentional destruction of archaeological materials or artifacts or the disturbance to any archaeological site.

(7) Use of detergents or chemicals for cleaning or maintenance of motor vehicles, machinery, or equipment.

(8) Hunting without permission IAW Base hunting order or recreational off-road vehicular traffic.

(9) Absolutely no ground disturbance will be permitted within or around the Pyramid Rock Training Area MOUT (within the Mokapu Burial Area).

(10) Use of live ordnance and O-Chlorobenzylidene Malonitrile (CS gas) is prohibited at MCTAB unless a deviation is approved by CO MCBH.

(11) Training activities that are not included in scope of the "Final Environmental Impact Statement, Land Use and Development Plan for Bellows Air Force Station" of December 1995 are prohibited at MCTAB unless new activities are approved through the NEPA process.

7. Police of RTA

a. Police of RTAs is the responsibility of the using unit. It is the responsibility of the OIC/RSO to ensure training facilities and RTAs used by their units have been properly policed. All solid waste brought to RTAs and training facilities, including cardboard, wrapping materials, food waste, communication wire, expended brass, and ammunition containers must be removed from those areas. No unit will depart from their training location until that area is in proper state of police and they have been cleared to depart by Range Control.

b. Dumpsters will not be provided at RTAs. Units who schedule their own must ensure they are removed upon completion of their exercise.

c. HAZMAT (i.e., paint, petroleum, oil, lubricants, etc.) used while training shall be stored in approved, closed, leak-proof containers. All hazardous materials shall be clearly marked.

8. Hazardous Waste

a. Units are required to provide funding for Hazardous Waste Disposal from exercises with unique funding. Units may need to set up a Line Of Accounting with the Environmental Department to pay for Hazardous Waste

Disposal. Non-MCBH units will need to set up a Line Of Accounting with the Environmental Department for Hazardous Waste Disposal.

b. Only authorized personnel from the Environmental Department can sign Uniform Hazardous Waste Manifests for MCBH, MCTAB, and Pu'uloa.

c. Satellite Accumulation Sites will have to be established for Hazardous Waste at Bellows and Hazardous Wastes that cannot be managed at the Waste Accumulations Sites on MCBH and Pu'uloa.

d. Flameless Ration Heaters from Meals Ready to Eat (MREs) must be used in accordance with the instructions. Unused MRE heaters are classified as Hazardous Waste.

e. Hazardous Waste generated at Bellows cannot be transported to MCBH. MCBH does not have an Environmental Protection Agency (EPA) Permit to treat, store, or dispose of Hazardous Waste.

f. Hazardous Waste at Pu'uloa and aboard MCBH can be managed in accordance with the Hazardous Waste Management Plan (BaseO 6280.9). Contact the Environmental Department for proper management procedures aboard MCBH and Pu'uloa.

9. Waste Water And Portable Toilets

a. Any organization assigned to a RTA shall properly police and clean heads and urinals in their assigned area. Trash (ration containers, cans, etc.) will not be disposed of in any head, urinal, or portable toilet.

b. Straddle trenches or cat holes used to dispose of solid human waste are not authorized at any MCBH range or training area.

c. Wastewater from temporary showers must be coordinated prior to any exercise or training evolution with the Environmental Department at (808) 257-6999.

d. Portable toilets are strategically located throughout MCBH Training Facilities and Ranges. These are contracted out and may not be moved by anyone other than the contractor. Units moving or damaging these portable toilets may be subject to fees incorporated by the contractor. MCBH will provide a total of 32 portable toilets in MCTAB. Additional support can be accommodated with prior coordination with the RTAM office.

10. Field Drinking Water Supply

a. All connections to the water system must be attached in such a manner as to prevent cross-connections and back-siphoning from a contaminated source to the potable distribution system. Water hoses at vehicle filling sites should not contact any source of contamination, including the vehicle, ground, tools, and equipment.

b. Desalination Training. Use of Tactical Water Purification System (TWPS) and Lightweight Purification System (LWPS). Units must submit training plans including scheme of maneuver and RM prior conducting

waterpurification/desalination training. Purified "fresh" water will not be returned directly into the ocean.

c. All instances of water pipe breaks, valve and pipe leaks and other system failures will be reported to the Facilities Department immediately.

11. Ulupa'u Head Wildlife Management Area

a. Figure 2-3 depicts the Ulupa'u Head WMA at Kaneohe Bay RTC. The Ulupa'u Head WMA is populated by a colony of red-footed boobies (*Sula Rubripes*), a migratory seabird protected by the Migratory Bird Act and state laws, as are all species of migratory shore and seabirds. The Environmental Compliance and Protection Department (EC&PD) is responsible for managing, conserving, and protecting all the cultural (archeological and historic) and natural resources within the Ulupa'u Head WMA. Figure 2-4 details the Nu'upia Ponds WMA.

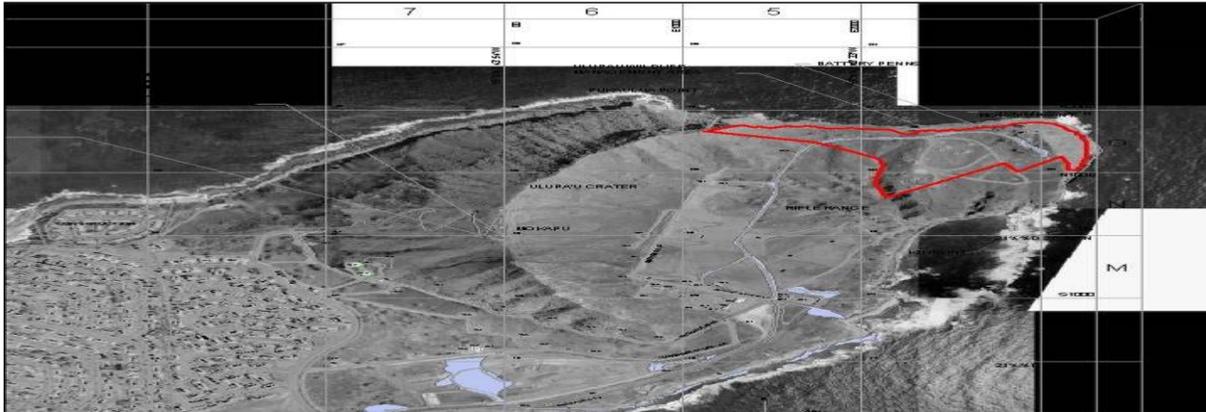


Figure 2-3. Ulupa'u Head WMA Diagram

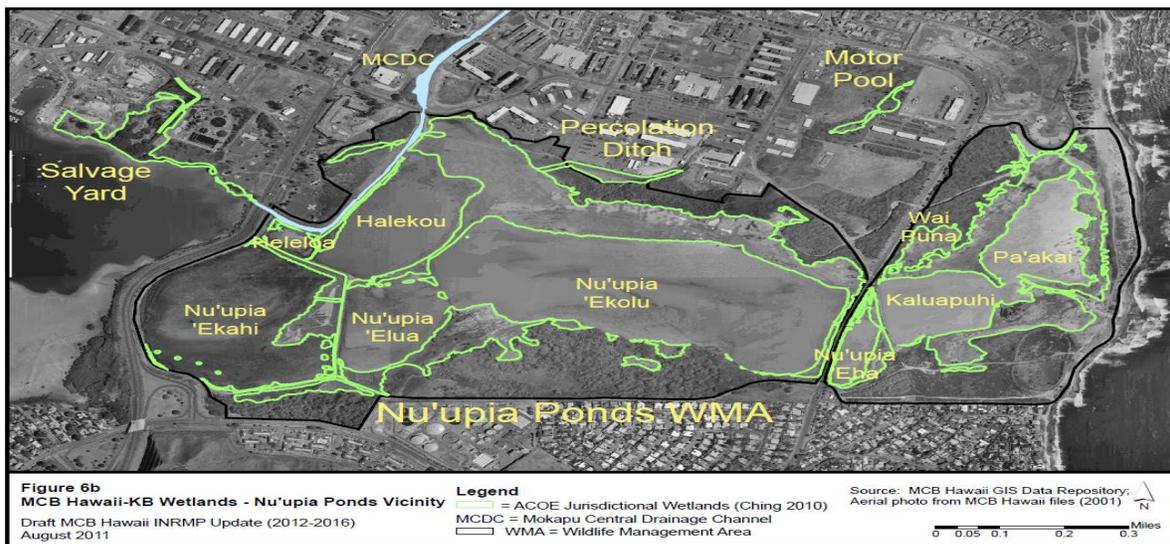


Figure 2-4. Nu'upia Ponds WMA

b. Figure 2-4. Nu'upia Ponds WMA area is home to four endangered water birds, an endangered plant, a large population of ground nesting Wedge-tailed shearwaters, and contains ancient Hawaiian burials. The Environmental Department is responsible for managing, conserving, and protecting all the cultural (archeological and historic) and natural resources within the Nu'upia Ponds WMA.

12. Training Within The Ulupa'u Head WMA. Live-firing directly into and maneuvering within the WMA is prohibited. When units use Ranges 1, 5, 7, 8A, 9, 9a, or 10 for training, extreme caution shall be exercised to preclude direct fire and/or stray rounds from entering the WMA, especially during any fire and maneuver exercises.

13. Fires Within The Ulupa'u Head WMA. Information regarding fires and firefighting instructions are contained in Chapter 1.

14. Tours/Visits Of The Ulupa'u Head WMA

a. All tours, visits, or work within the WMA will be coordinated through the Environmental Natural Resources managers and scheduled in the RFMSS per Chapter 3, paragraph 3. The EC&PD and the PAO routinely sponsor technical assistance visits and/or tours of the WMA. Representatives of federal, state, and private agencies furnishing professional advice and technical assistance on wildlife and wildfire management concerns shall be allowed reasonable opportunities for access to the WMA. Work or site visits conducted in the WMA will be coordinated by EC&PD and requested via the RFMSS to RTAM at least seven days in advance of any scheduled work. All site visits, tours, or work in the WMA will be scheduled around military training.

b. Range personnel will be present at the range during all site work, visits, or tours.

c. UXO is a serious safety concern. All personnel, participating in a WMA site visit or performing maintenance at a WMA site, will stay on established roads unless specific permission has been granted by the RCO. An EOD escort and medical support must be present on the range. Only designated work personnel performing WMA maintenance will be authorized into the WMA.

d. The site visit leader shall inform range personnel of the anticipated amount of time they intend to spend in the WMA.

e. The site visit leader shall carry a range radio with them and maintain communication with Range Control.

f. POVs may be authorized on a case-by-case basis, but must stay on established roads. Coordination will be made with the Installation RCO.

g. Medical support and EOD will be present wherever work is performed in the High Hazard impact area located within the WMA. Coordinating for EOD and medical support is the requesting unit/agency's responsibility.

15. National Environmental Policy Act (NEPA)

a. Whenever there is a proposed change to established range use, request for a substantial increase in range use, planned development of new courses, or construction or introduction of new weapons' systems, an environmental review of the proposed activity/project shall be conducted prior to approval and scheduling of such proposed action(s). Documentation usually takes the form of a Categorical Exclusion (CATEX), Environmental Assessment (EA) or an Environmental Impact Statement (EIS). A CATEX/EA/EIS shall be undertaken at the earliest planning stages of the proposed action(s) and is more fully described in reference (d). Requests for any NEPA necessary regarding a proposed action on a range or training area starts with a written request at least six months from the proposed action to S-3 RTAM. EC&PD can be contacted at (808) 257-1256, and the Facilities Department at (808) 257-2175, for the latest rules and procedures in preparing for approval the requisite CATEX/EA/EIS prior to the implementation of an action. The following are some examples, which, under normal conditions, require the preparation of a CATEX/EA/EIS: New target ranges or range mission changes which could increase environmental impact. Creation of or changes to, low altitude aircraft training routes, special use airspace and warning areas wherein over flights constitute a nuisance factor to wildlife. Proposed action in a protected species habitat. New revisions to established regulations, directives, or policy guidance which initiate actions. Any action with possible environmental impact or likelihood to cause public controversy. Any action that will impact historic or archeological sites. Any digging in a landfill site shown in Figure 2-5, MCTAB Landfill Sites.

16. Marine Corps Training Area Bellows Landfill Sites. Figure 2-5 depicts the MCTAB Landfill Sites. Digging is prohibited within landfill sites, unless approved by a CATEX/EA/EIS.

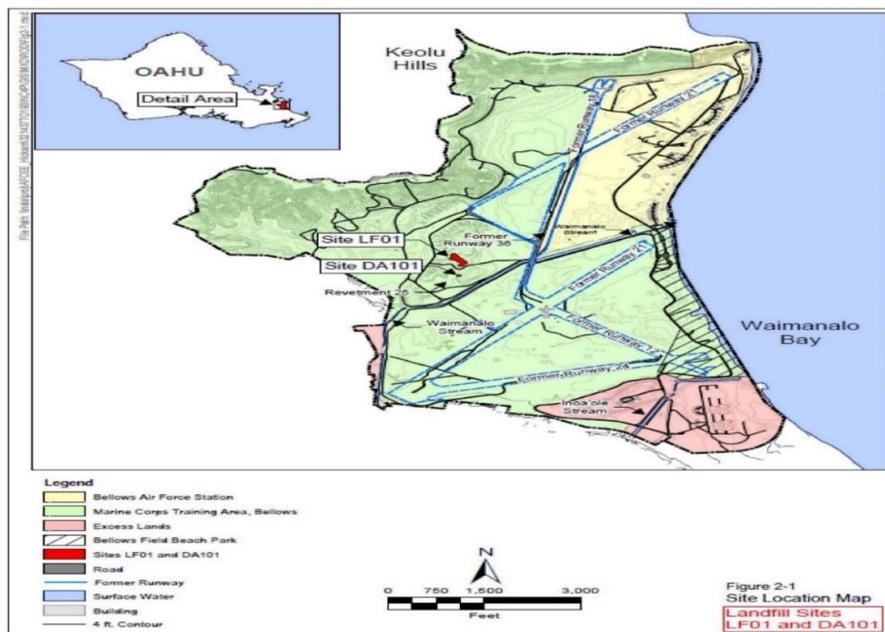


Figure 2-5. MCTAB Landfill Site Diagram

Chapter 3

Scheduling Procedures

1. General

a. This chapter establishes policies, procedures, and responsibilities for the scheduling of the MCBH RTC. These training resources are available for use by all DOD Services, federal, and local law enforcement agencies.

b. The Range Management Office is the approving agency for all RTAs, facilities, simulators and classroom requests. To schedule, the Range Management Office must receive a RFMSS request NLT the day prior to occupying or utilizing any RTA or facility aboard the MCBH RTC. Same day requests will be handled on a case by case basis.

c. Once the requesting unit has submitted a request, it is the responsibility of the unit to ensure they are in compliance with their authorized times and dates. Any modification or cancellation to the request must be communicated to the Range Management Office NLT five working days prior to the start of the event. Firing times cannot be changed or modified after 1630 on Monday of the preceding week, due to the weekly Notice to Mariners' and airspace de-confliction submissions.

2. RFMSS. RFMSS is an automated range request system currently in use at most installations abroad and in the Continental United States. All units will have access to ranges and training resources via the World Wide Web at <https://rfmss.lmfs.belvoir.army.mil/> from a pre-approved operating system having met all requirements IAW the Navy and Marine Corps Intranet. Units may contact the MCBH RFMSS Functional Administrator at (808) 257-8816 to receive their unit login and password for requesting use of the MCBH RTC.

3. Scheduling

a. Conference. MCBH RTAM will host a quarterly land resource conference on the third Thursday of the middle month prior to the beginning of the next quarter. Participation in the quarterly conference is mandatory to ensure requests are approved and conflicts resolved. If a unit representative is unable to attend, the Range Management Office must be notified NLT five working days prior to the conference to ensure requests are processed appropriately. The MCBH RFMSS website will have the convening message posted on a continuous basis.

(1) Third Thursday of August: first quarter of next fiscal year (FY). Priorities one and two will submit their entire annual plan.

(2) Third Thursday of November: Second quarter of current FY.

(3) Third Thursday of February: Third quarter of current FY.

(4) Third Thursday of May: Fourth quarter of current FY.

b. Priorities. Ranges and training facilities will be assigned to requesting units based on the priority listed below.

- (1) Annual marksmanship training details.
- (2) Formal schools training plan.
- (3) Pre-deployment training programs for the next scheduled deploying unit, regardless of service.
- (4) Marine Expeditionary Units (MEUs) training in transit.
- (5) High-level annual or bi-annual exercises (e.g., RIMPAC).
- (6) Exercises at the discretion of the MCBH CO may preclude all scheduled training.

c. Document Submission

(1) Units requesting LFAM or high explosives training (including rockets, mortars, grenades, demolitions, APOBS) must conduct a range walk and submit a Scheme of Maneuver (SOM) and signed RM worksheet to Range Control NLT 30 days prior to the start of training.

(a) The range walk must be conducted by the training unit OIC and RSO with a member of the Range Control staff.

(b) The required documentation will be uploaded to the documents tab of the RCNI in RFMSS.

(c) Requests will be put into a CON-RES status when approved by the RFMSS scheduler; final approval by Range Control will occur when all requirements are met.

(d) Cancellation of the event will occur if the range walk is not completed and documents are not received by the deadline.

(2) CONOPS for HIGH RISK/non-standard training will be submitted to the RCO for approval.

(3) Training including the use of pyrotechnics requires a submittal of a Pyro Waiver Request (see Appendix J).

4. Hosted Events

a. The local OIC/RSO training will be conducted per a bulletin published to the RFMSS library, titled CY XX Annual RSO/OIC Briefing Schedule.

b. The MCBH RFMSS Functional Administrator will conduct RFMSS training for unit representatives upon request.

c. The base S-3 will conduct a training symposium, as requested, in order to discuss the latest MCBH RTC improvements. To schedule a date and time, contact the MCBH RCO.

d. The Pu'uloa RTF will conduct an annual marksmanship quota allocation conference in July. The Pu'uloa RTF OIC should be contacted for more details.

5. Airspace and Aviation Scheduling. Specifics concerning the use of airspace are covered in reference (p). Scheduling of Landing Zones (LZs) and Drop Zones (DZs) must be submitted via RFMSS. Request for MCAS controlled TAs will be approved by MCAS Operations.

6. Same Day Scheduling. The MCBH Range Control FDO (808 257-3180), Pu'uloa RTF FDO (808) 474-8061, and the classrooms and simulator scheduler (808) 257-4393 are authorized to make same day scheduling changes depending on the weekly airspace de-confliction worksheet, Notice to Mariners, and contractor support availability.

Chapter 4

Airspace and Aviation Operations

1. General

a. This chapter describes the Training Areas (TAs) for use by aviation units and commands that are using or supporting aviation operations including MCTAB, Helicopters, DZs, and Unmanned Aircraft Systems (UAS) operation. The chapter sets forth instructions pertaining to their use. This chapter briefly discusses airspace and aviation facilities at MCBH. For detailed information concerning all aircraft, airspace, and airspace safety parameters and regulations, refer to MCAS Order P3710 series.

b. Nothing in these instructions shall prevent the exercise of sound judgment to preserve lives and property, or to ensure the safety of personnel.

c. COs of aviation units are responsible for the conduct of safe flight operations.

d. Same day requests for use of the HLZs is authorized. Pilots shall contact Range Control via UHF to request same day use of an HLZ. Range Control will verify with the pilot that the HLZ is cleared for use.

2. MCAS

a. The CO of MCAS is responsible for the daily oversight of airspace and coordinates directly with the MCBH, S-3 and Scheduler, for de-conflicting all LZs and DZs described in this order.

b. MCAS ensures the scheduling and safe operations for all aircraft operating at MCAS within the associated Class D and Terminal airspace.

c. For detailed information concerning Airfield Operations, refer to reference (p).

3. Course Rules

a. Tenant Responsibilities. Pilots shall be knowledgeable of the local course rules and procedures contained in reference (p). To ensure currency, units shall obtain an annual Course Rules Brief (CRB) through the Air Traffic Control Station Officer (ATCSO). In the interest of noise abatement for the surrounding communities, all aircrews shall comply with local course rules and deviate only as necessary in the interest of safety or during emergencies.

b. Transient Responsibilities. Transient pilots conducting extended operations at MCAS Kaneohe Bay, MCBH shall obtain a CRB prior to commencing operations. Transient detachments, MEUs, and deployed squadrons shall plan accordingly to make pilots available for the MCAS CRB. This brief will be scheduled through the Airfield Operations Officer during the coordination phase for airfield services by calling DSN 457-3579/8389, or commercially at (808) 257-3579/8389.

4. Airfield Services Support. For a complete listing of airfield services support, contact MCAS Operations at DSN 457-8389, or commercially at (808) 257-8389.

5. Airspace and Aviation Station Scheduling

a. MCBH is a small community with a large capability to support numerous operations. It is the responsibility of the requesting unit to ensure its requests are properly routed through the MCBH Range Scheduler for all LZs and DZs. Requests for LZs and DZs will not constitute a request for aircraft support. The requestor must submit both requests separately. For detailed information regarding scheduling of TAs, refer to Chapter 3 of this order.

b. All requests for airspace and aviation support, contact MCAS Operations at DSN 457-3579/8389, or commercially at (808) 257-3579/8389.

6. Local Flying Area. The Local Flying Area for MCAS Kaneohe Bay, MCBH includes all major Hawaiian Islands and other areas within 250 nautical miles of MCAS Kaneohe Bay, MCBH. The Vertical Hazard to the SDZ when flying over the Kaneohe Bay RTF is 904 meters (2,966 ft.) above MSL. See MCAS Operations SOP P3710.1 for more information.

7. Runway Crossing

a. Guidelines. The following guidelines will be followed to ensure the safe execution of this event:

(1) Only unit-sized formations will be authorized to cross the runway. At no time will individual runners be permitted to cross the runway when it is active. The only authorized running area will be on the west side of the runway.

(2) An e-mail request to the MCBH installation RCO is required to be submitted prior to the event.

(3) MCAS Operations will ensure the Landing Safety Officer (LSO) vehicle is located at the road crossing. The LSO will monitor radio traffic to assist in time of an emergency and clear the runway. The LSO will be responsible to ensure that foreign object damage (FOD) is removed from the runway following each crossing.

b. The POC at MCAS is the Airfield Operations Officer or MCAS Operations Chief and can be contacted by calling (808) 257-8389/8425.

8. Helicopter Landing Zones

a. MCBH Helicopter LZs. The following LZs are controlled by MCBH, S-3 and are located aboard MCBH. The Helicopter LZ at Camp Smith rules and regulations set forth have been prepared IAW the current edition of NAVAIR 00-80R-14, U.S. Navy Aircraft Firefighting and Rescue Manual, and the Federal Aviation Administration (FAA) Regulations. The use of any LZ off the airfield runway requires coordination with MCBH, S-3 RTAM.

b. LZ/Gun Position (GP) 216

(1) LZ/GP 216 is located in the open field southwest of Building 216. LZ/GP 216 may also be used as a GP or a Command and Control TA. Figure 4-1 shows the location of LZ/GP 216.

(a) LZ/GP 216 is restricted to day Visual Flight Rules (VFR) use only. Takeoffs and landings will be made at the pilot's own risk. A maximum of 4 UH/AH 1, 4 MV22, 4 CH53E may be in zone at any one time.

(b) While awaiting clearance, aircraft will hold over Kaneohe Bay at 500 ft. MSL. Once cleared, aircraft shall proceed directly to the LZ for landing.

(c) The Control Tower will provide approach and departure clearances. Air Traffic Control (ATC) cannot issue landing or takeoff clearances, as LZ/GP 216 is not visible from the Tower. Pilots shall inform the Tower when landing is completed and shall request permission to lift.

(d) LZ/GP 216 departures shall be conducted IAW departure procedures set forth in this paragraph of Control Tower instructions. Departing LZ/GP 216 on a northeasterly heading, aircraft shall make a right turnout prior to reaching Kansas Tower (KT) IOT depart on a southwesterly heading. Aircraft shall then proceed directly to Kaneohe Bay. Aircraft departing LZ/GP 216 on a southwesterly heading shall proceed straight ahead, directly to Kaneohe Bay.

(e) ARFF support of LZ/GP 216 operations is not required.

(f) Requirements for helicopter use of LZ/GP 216 shall be coordinated with MCBH, S-3. A RFMSS request must be submitted. RTAM will confirm the use of LZ/GP 216 with MCAS Airfield Operations on the date of the scheduled flight.

(g) If the use of LZ/GP 216 is a troop lift, the supported unit OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

c. LZ Boondocker

(1) LZ Boondocker is an open area 250 ft. by 300 ft. located inside the Boondocker TA. The LZ is approximately 350 meters southeast of the Combat Convoy Simulator. This LZ is used as a tactical LZ for troop inserts/extracts and special patrol inserts/extracts (SPIE)/rappelling. This LZ is intended for use by helicopters and tilt rotor aircraft only. Aircraft generated noise and its effect on the residents of both MCBH and surrounding community and effects on the endangered water birds in the adjacent Nu'upia Ponds WMA are of great concern. LZ Boondocker usage must be coordinated and conducted so as to avoid adverse public reaction. Figure 4-2 details the location of LZ Boondocker.

(2) Flight Procedures. For information regarding flight procedures, see MCASO 3710.2.



Figure 4-1. Location of LZ/GP 216

(a) LZ Boondocker is restricted to day VFR use only. Formation flights into and out of LZ Boondocker are permitted for sections of aircraft only. A maximum of six UH / AH 1, six MV22s or six CH53E may be in the LZ at any one time.

(b) The tower will continue to control Fort Hase entry and departure traffic for those aircraft not involved in LZ Boondocker operations. Opposite direction traffic will not be permitted for aircraft approaching/departing LZ Boondocker. The Control Tower will provide approach and departure clearances for LZ Boondocker. ATC cannot issue landing or takeoff clearances, as LZ Boondocker is not visible from the tower. Takeoffs and landings will be made at the pilot's own risk.

(c) SPIE rigging, rappelling, and fast rope operations are permitted. External and ordnance lifts are prohibited due to road crossings, the proximity of power lines south and west of the LZ, and the presence of MCBH's residential and industrial areas within the ordnance safety area.

(d) Marshaling areas for helicopters desiring entry into LZ Boondocker will be established over Kaneohe Bay in the vicinity of the 101 Pad or over Kailua Bay, east of Fort Hase Rock at 500 ft. above MSL.

(e) The tower frequency shall be monitored by the pilot at all times during LZ Boondocker operations.

(f) Request for approaches/clearances shall be made over Kaneohe Bay, well clear of the H-3 gate or over Kailua Bay, well clear of Fort Hase Rock. Clearance will be given for the approach. Pilots shall report, "safe on deck" to the Control Tower.

(g) Kaneohe Bay approach to LZ Boondocker from Kaneohe Bay shall cross the shoreline in the vicinity of the H-3 gate at 300 ft. above MSL. Wave-offs shall be executed straight ahead so as to cross Fort Hase Rock at 300 ft. above MSL. Fort Hase Rock approach to LZ Boondocker from Kailua Bay shall cross Fort Hase Rock at 300 ft. MSL and may begin a descent for landing upon crossing the Rock. Wave-offs shall be straight ahead so as to cross the shoreline in the vicinity of the H-3 gate at 300 ft. above MSL.

(h) The approach turns. Aircraft unable to execute straight-in approaches due to existing winds shall maintain 300 ft., pass over the zone, and continue straight ahead to either Kaneohe Bay or Fort Hase Rock, as appropriate. Once over the water, aircraft should turn to set up for re-entry and a straight-in approach. Approach turns abeam the zone shall not be executed due to the proximity to both civilian and military housing and the base industrial area.

(i) Departing from LZ Boondocker, pilots shall advise Kaneohe Tower when departing so traffic flow may be adjusted accordingly. The pilot will report when airborne to the Tower and receive further departure instructions, if necessary. For Kaneohe Bay departure from LZ Boondocker, aircraft shall proceed toward Kaneohe Bay. Aircraft shall cross the shoreline in the vicinity of the H-3 gate at 300 ft. above MSL. Departing from Fort Hase, aircraft shall proceed toward Fort Hase Rock, cross the shoreline at 300 ft. above MSL, and report "Fort Hase clear" when over the Rock. Overflights of Aikahi Park residential area are prohibited. Aircraft desiring a reverse course departure from their takeoff heading should climb straight ahead to 300 ft. above MSL. After crossing the shoreline of Kaneohe Bay or when reporting "Fort Hase clear", aircraft should make an appropriate turn to reverse course and request a Fort Hase transition, if available, IAW normal course rules.

(j) All pilots and ground personnel shall be aware of all hazards while occupying LZ Boondocker. A double power line, elevated by poles measuring 60 ft. in height, is located approximately 150 yards south and west of LZ Boondocker. This power line is the primary source of electrical power for MCBH Kaneohe Bay. LZ Boondocker is located within the Boondocker TA. There is an obstacle course that consists of numerous obstacles ranging from 4 to 40 ft. in height, a 35 ft. rappel tower and a MOUT site.

(k) The Nu'upia Ponds habitat is a Wildlife Management Area located approximately 300 yards south of LZ Boondocker. Extensive bird activity should be expected in the vicinity of these ponds. Aircraft shall avoid over flying the Nu'upia Ponds to the south and base residential areas to the north of LZ Boondocker.

(l) Requirements for helicopter use of HLZ Boondocker shall be coordinated with MCBH, S-3 RTAM. Normally a seven-day lead time is necessary to ensure deconfliction of other training activities is conducted. However, for CALs only, a same day RFMSS request is possible by having the Squadron

ODO call the Range Control FDO at 257-3180 and make a verbal request. Range Control will verify that the HLZ is clear of non-participating personnel and notify the ODO the times the HLZ is available. The aircraft commander or section lead will then call Range Control via established radio frequencies and request permission to commence CAL practice. No ground OIC/RSO is required for CAL practice. For troop lifts the supported unit will provide ground OIC/RSO and safety vehicle support.

(m) Prior to commencement of troop lift, rappelling or SPIE rig training, an OIC/RSO/HRST master from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

(2) For information regarding flight procedures, see reference (p).



Figure 4-2. Location of LZ Boondocker

d. LZ Eagle

(1) LZ Eagle is approximately 150 meters by 100 meters in size, located across the hard surface road from Fort Hase Beach. Its close proximity to base housing areas and heavily used roads, necessitates coordination with MCBH S-3. Figure 4-3 shows the location of LZ Eagle.

(a) LZ Eagle is approved for daylight and limited visibility VFR use when approved in RFMSS. Flight operations shall not begin before 0700 or continue past 2200 Monday through Sunday. Exceptions may be approved on a case by case basis by MCBH S-3 Director. Road guards will be utilized to

keep pedestrians clear of the LZ when in use. A maximum of six UH / AH 1s, six MV22s or six CH53Es may be in zone at any one time.

(b) The Control Tower will provide approach and departure clearances. ATC cannot issue landing or takeoff clearances, as LZ Eagle is not visible from the tower. All aircraft utilizing LZ Eagle shall remain well east of the range. Fort Hase Entry/Departure routes shall be closed to all aircraft not entering or departing LZ Eagle.

(c) Marshaling areas for aircraft entering LZ Eagle will be established over Kailua Bay east of Fort Hase Rock at 500 ft. MSL. Aircraft shall be under positive control of the Control Tower.

(d) Aircraft approaching LZ Eagle are prohibited from flying over family housing. Aircraft desiring to land at LZ Eagle shall contact the Control Tower. Calls should be made at least two minutes prior to reaching Fort Hase Rock. Pilots will receive weather information and an authorization for the approach but will not receive a landing clearance. Aircraft shall commence their approaches from Fort Hase Rock to LZ Eagle at or below 200 ft. MSL and proceed to the LZ. All landings will be made at pilot's own risk. Pilots will report "safe on deck" to the Control Tower. Refer to MCASO 3710.2 for responsibilities of all agencies.

(e) LZ Eagle departures shall contact the Control Tower and advise when ready for departure. The tower will repeat any weather information. Takeoff will be at the pilot's own risk. The pilot will report when airborne to the Tower and receive further departure instructions as necessary. All departing aircraft shall fly directly to Fort Hase Rock at or above 300 ft. MSL.

(f) Some obstacles in the vicinity of LZ Eagle include a two-story family housing area which forms the northwest boundary of the LZ, three 30 ft. streetlights (no wires) along the road which form the northwest boundary and one 50 ft. telephone pole (no wires) is approximately 50 meters northeast of the LZ. There are numerous obstacles between the beach and the road forming the southeast boundary that are all less than 20 ft. in height, and one 3 ft. pipe is extending out of the ground approximately 30 ft. into the LZ from the southeastern boundary.

(g) Requirements for helicopter use of LZ Eagle shall be coordinated with MCBH, S-3 RTAM. A RFMSS request must be submitted. S-3 will confirm the use of LZ Eagle with MCAS Airfield Operations on the date of the scheduled flight.

(h) Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

(2) Flight Procedures. For information regarding flight procedures, see reference (p).

e. MCTAB LZs

(1) The LZs Gull, Noni, Owl, Hawk and Chickadee are controlled by MCBH, S-3, and located at MCTAB. The use of any LZ off the airfield runway requires coordination MCBH, S-3 RTAM. Paragraph 10 contains more information regarding LZs at MCBH.



Figure 4-3. Location of LZ Eagle

(2) Training authorized at MCTAB LZ(s) includes assault landings, SIMCAS, low-level flight training, SPIE, rappel, forward arming and refueling (FARP), Helicopter Rope Suspension Techniques (HRST) training. Helicopters will only land/takeoff from designated LZs and will strictly adhere to flight patterns IAW MCASO 3710.2.

(a) LZ Gull has a maximum capacity of 6 H-1/4 MV22/4 CH53E and is located at grids: 4QFJ 33006340 33296365, LZ Noni has a maximum capacity of 6 H-1/4 MV22/4 CH53E and is located at grids: 4QFJ 32776173 32986199, LZ Owl has a maximum capacity of 6 H-1/4 MV22/4 CH53E and is located at grids: 4QFJ 33336241 33606278, LZ Hawk has a maximum capacity of 6 H-1/4 MV22/4 CH53E and is located at grids: 4QFJ 33396213 - 33766185 and LZ Chickadee has a maximum capacity of 6 H-1/4 MV22/4 CH53E and is located at grids 4QFJ 3312161571 3362361724 aboard MCTAB. Helicopters will only land/takeoff from designated LZs and will strictly adhere to flight pattern prescribed per MCASO 3710.2. Figures 4-10 through 4-15 shows the location of the LZs.

(b) Helicopter operations are limited to the following schedule: Monday-Friday from 0700-2200. Weekends and holidays 0900-2200. Requests to conduct helicopter operations during times outside the limits stated above, may be approved by the MCBH, S-3 on a case-by-case basis.

(c) Ingress and egress for all helicopters is seaward and within the confines of TA 1. Designated ingress altitude is 300 ft. Above Ground Level (AGL); designated egress altitude is 100 ft. AGL. Additionally, helicopters must stay within the confines of TAs 2 and 3. Over-flights of adjacent areas are not authorized.

(d) Special VFR (SVFR) are not authorized.

(e) Every effort will be made to maximize safety and minimize noise (rotor) and other disturbances to the surrounding military and civilian community.

(f) Requirements for helicopter use of MCTAB HLZs shall be coordinated with MCBH, S-3 RTAM. Normally a seven-day lead time is necessary to ensure DE confliction of other training activities. However, for CALs only, a same day RFMSS request is possible by having the Squadron ODO call the Range Control FDO at 257-3180 and make a verbal request. Range Control will verify that the HLZ requested is clear of non-participating personnel and notify the ODO the times the HLZ is available. The aircraft commander or section lead will then call Range Control via established radio frequencies and request permission to commence CAL practice. No ground OIC/RSO is required for CAL practice. For troop lifts, the supported unit will provide ground OIC/RSO and safety vehicle support. Prior to commencement of troop lift, rappel or SPIE training, an OIC/RSO/HRST master from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

(g) FARP operations may be conducted when approved by Range Control. Units requesting to conduct FARP operations will submit a SOM, RM, and a containment/spill management plan. All FARP procedures outlined in FMs, TM, and unit SOPs will be strictly adhered to.

f. LZ Smith

(1) LZ Smith is the primary Helicopter LZ for all helicopter operations aboard Camp H. M. Smith. Figure 4-4 depicts the location of LZ Smith. The LZ is capable of receiving aircraft during daylight hours and during VFR only, except in the case of emergencies. LZ Smith is located in the northeastern corner of the camp known as Smith Field. It is roughly 165 meters by 125 meters, marked rectangular field. The long axis of the field runs north and south.

(a) The LZ has a maximum capacity of 2 H-1/1 MV22/1 CH53E and is located at coordinates 137/659 on the 1:25,000 grid map (5420 IV Waipahu) and sits approximately 600 meters northeast from the Marine Forces Pacific Headquarters Building.

(b) Requirements for helicopter use of LZ Smith shall be coordinated with MCBH, base S-3 at least seven business days in advance. A RFMSS request must be submitted. Scheduling routine use of the LZ between the hours of 1100-1300, Monday-Friday, should be discouraged. Notification will be given to MARFORPAC and Military Police Department (MPD) when

scheduling the use of LZ Smith. S-3 will confirm the use of LZ Smith with MCAS Airfield Operations on the date of the scheduled flight.

(2) Flight Procedures. For information regarding flight procedures, refer to the following documents:

- (a) See Camp H. M. Smith BM/Camp Order 11132.2B
- (b) MCASO 3710.2.



Figure 4-4. Location of LZ Smith

g. LZ Ulupa'u

(1) LZ Ulupa'u is a special-use LZ inside Ulupa'u Crater near Range 9, KBRTC. This LZ allows for day and night operations, HRST training and external lifts.

(a) All live fire at KBRTF must be in a "check fire" status before this LZ will be opened. Center grid for this LZ is 3196772777 (R-9) (WGS 84).

(b) The Control Tower will provide approach and departure clearances. ATC cannot issue landing or takeoff clearances, as LZ Ulupa'u is not visible from the tower. LZ Ulupa'u entry/departure routes shall be closed to all aircraft not entering or departing the LZ.

(c) Aircraft approaching LZ Ulupa'u are prohibited from flying over family housing. The location of LZ Ulupa'u is displayed in Figure 4-5. Use of LZ Ulupa'u is not intended for routine use. Request must be submitted to MCBH, S-3 RTAM. Aircraft desiring to land at LZ Ulupa'u shall contact the

Control Tower. Calls should be made at least two minutes prior to reaching Fort Hase Rock. Pilots will receive weather information and an authorization for the approach but will not receive a landing clearance. Aircraft shall commence their approaches from Fort Hase Rock to LZ Ulupa'u at or below 200 ft. MSL and proceed to the LZ. All landings will be made at pilot's own risk. Pilots will report "safe on deck" to the Control Tower. Refer to MCASO 3710.2 for responsibilities of all agencies.

(d) LZ Ulupa'u departures shall contact the Control Tower and advise when ready for departure. Tower will repeat any weather information. Takeoff will be at the pilot's own risk. The pilot will report when airborne to the Tower and receive further departure instructions as necessary. All departing aircraft shall fly directly to Fort Hase Rock at or above 300 ft. MSL. This LZ is subject to "brown-outs" during the summer months.

(e) Requirements for helicopter use of LZ Ulupa'u shall be coordinated with MCBH, S-3 RTAM. A RFMSS request must be submitted. RTAM will confirm the use of LZ Ulupa'u with MCAS Airfield Operations on the date of the scheduled flight.

(f) Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

(2) Flight Procedures. For information regarding flight procedures see MCASO 3710.2.



Figure 4-5. Location of LZ Ulupa'u

h. LZ Country

(1) LZ Country is a special-use LZ on top of the Ulupa'u Crater on Range 10, Kaneohe Bay RTF. This LZ allows for day and night operations, HRST training and external lifts.

(a) Center grid for this LZ is 31396 72998 (R-10) (WGS 84).

(b) The Control Tower will provide approach and departure clearances. ATC cannot issue landing or takeoff clearances, as LZ Country is not visible from the tower. LZ Country entry/departure routes shall be closed to all aircraft not entering or departing the LZ.

(c) Aircraft approaching LZ Country are prohibited from flying over family housing. The location of LZ Country is displayed in Figure 4-6. LZ Country is not intended for routine use. Requests must be submitted to MCBH, S-3. Aircraft desiring to land at LZ Country shall contact the Control Tower. Calls should be made at least two minutes prior to reaching the zone. Pilots will receive weather information and an authorization for the approach but will not receive a landing clearance. Aircraft shall commence their approaches from Fort Hase Rock to LZ Country at or below 200 ft. MSL and proceed to the LZ. All landings will be made at pilot's own risk. Pilots will report "safe on deck" to the Control Tower. Refer to MCASO 3710.2 for responsibilities of all agencies.

(d) LZ Country departures shall contact the Control Tower and advise when ready for departure. Tower will repeat any weather information. Takeoff will be at the pilot's own risk. The pilot will report when airborne to the Tower and receive further departure instructions as necessary. All departing aircraft shall fly directly to Fort Hase Rock at or above 300 ft. MSL.

(e) Requirements for helicopter use of LZ Country shall be coordinated with MCBH, S-3 RTAM. A RFMSS request must be submitted. RTAM will confirm the use of LZ Country with MCAS Airfield Operations on the date of the scheduled flight.

(f) Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

(2) Flight Procedures. For information regarding flight procedures see reference (p).



Figure 4-6. LZ Country

i. MCAS Controlled TAs

(1) For a complete description of the rules governing MCAS controlled TAs, see reference (p), MCAS Air Operations Manual P3710.1J.

(2) Authorized helicopter landing areas within the flight line property aboard MCBH are listed below and displayed in Figure 4-7. Helicopter landings at any other location must have prior approval of Airfield Operations. Requests, via RFMSS, should be submitted to MCAS Airfield Operations at least five business days prior to usage.

(a) West Field. West Field is the helicopter operating area linked to and northwest of runway 04/22. This area contains helicopter parking areas, a troop cargo staging area, an external pickup and hover pad, an ordnance assembly building, a tactical Airfield Fuel Dispensing System unit, a CLZ for Landing Craft Air-Cushioned (LCAC) aircraft and corresponding taxiways. A simulated ship deck oriented 040/220 degrees magnetic, is painted at the north end for helicopter Field Carrier Landing Practice training. West Field operations are closed to nonessential aircraft when utilized for ordnance loading/staging.

(b) Hangar 101 Helipad. Helicopter landing pad 101 is located in the southeast corner of the mat, adjacent to and east of hangar 101 for use by tenant squadrons.

(c) Pad Seven and Eight. Pad seven and eight is the general ramp area marked by white "H's" located South of FOXTROT taxiway west of an adjacent to Runway 05, northeast of the Combat Aircraft Loading Area (CALA).



Figure 4-7. MCAS Controlled TAs

9. Drop Zones

a. Request for use of any DZ will be submitted to the CO, MCAS via MCBH, S-3 RTAM.

b. DZ Shark (land jump) is located on the northeast end of the runway. Only RAM Air Parachutes are permitted to be utilized for parachute operations at DZ Shark. Figure 4-8 shows the location of DZ Shark.

c. DZ Kaneohe Bay (water jump) is located in the water off the southwest end of the runway. Figure 4-9 details the location of DZ Kaneohe Bay.

d. DZ Tiger Shark (land jump) is located at MCTAB in TA2. Figure 4-10 details the location of DZ Tiger Shark.

e. DZ Jacobs (water jump) is located approximately 500 meters off of the coast at TA1 at MCTAB. Figure 4-11 details the location of DZ Jacobs.

f. All training must be consistent with MCASO 3710.2.

g. Prior to conducting any parachute/paradrop operations, the unit desiring to conduct such training must coordinate and schedule (in advance) the airspace and the appropriate DZ requirements needed to support the operation. Scheduling airspace and DZ requirements must be done through MCAS RFMSS scheduler. MCAS Operations will notify the MCBH, S-3 whenever airborne operations are planned.

h. The following restrictions and safety precautions apply to all parachute operations at MCBH:

(1) The DZ Commander must have an anemometer at the DZ site to measure wind speed.

(2) The DZ Commander will have the final approval authority for drops based on the wind condition.

(3) The DZ Commander will suspend or cancel drop operations if, in his/her judgment, wind direction or wind gusts in combination with aircraft position make the drop unsafe.

(4) The DZ Commander must maintain two-way radio contact with the drop aircraft and the tower. In the event of radio communication failure, a single red smoke grenade, or other established visual signal, will be used to indicate "NO DROP" and shall suspend operations until air-to-ground communications can be re-established. A safety vehicle/vessel and Hospital Corpsman/Medic/EMT must be present and located in the same immediate area as the DZ Commander.

(5) During static-line parachute operations, using MC1-1B/C, T-10B/C round parachutes, the winds on the surface will not exceed 13 knots, or 30 knots through the jump altitude. Round parachutes are not permitted to be utilized when using DZ Shark. When utilizing Ram-Air parachutes, whether it be static-line deployed or manually deployed, the winds on the surface will not exceed 18 knots; the winds through the jump altitude are unlimited.

(6) No drops will be made from altitudes which exceed the height restrictions of MCBH (MCAS) "class D" airspace, unless coordinated in advance with MCAS Operations.

(7) All High Altitude High/Low Opening jumps shall be conducted in VFR conditions including aircraft transit/pattern and jumper descent to DZ.

(8) Units jumping into DZs must also coordinate with MPD and Water Front Operations (WFO) for additional support.

(9) Parachute operations will be conducted in designated DZ areas only as established by the MCBH, S-3 RTAM. Requests for parachute operations in areas other than established DZs will require advance approval from MCBH, S-3 and MCAS Operations.

i. The following control procedures will apply to all parachute operations conducted aboard MCBH (to include MCTAB):

(1) The DZ Commander shall be physically located in the DZ. Prior to positioning within the DZ, the DZ Commander must contact MCAS Operations and Range Control to receive a DZ safety brief. At this time, the DZ Commander will also provide MCAS Operations and Range Control, with a brief summary of the training scenario to be used, to include the type of aircraft, proposed start and stop times, and the type of personnel involved.

(2) All aircraft entering MCBH (MCAS) "class D" airspace or MCTAB "class G" airspace for participation in parachute operations must first check-in with MCAS Operations. After clearance into the airspace, the tower (MCAS Operations) will pass control of the aircraft to the DZ Commander.



Figure 4-8. DZ Shark

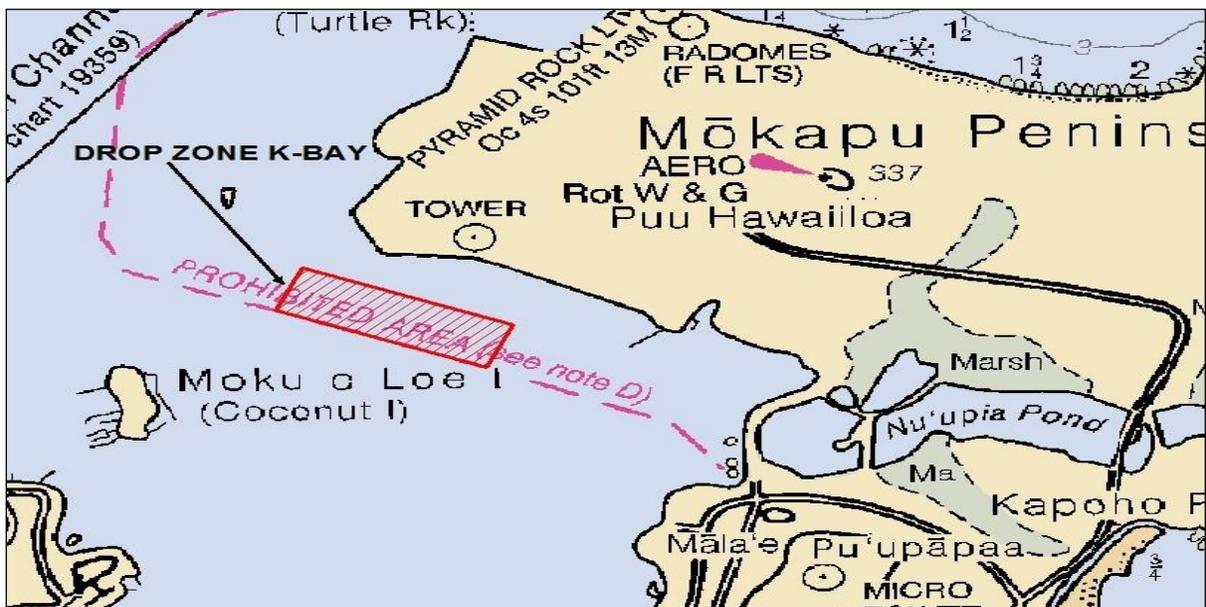


Figure 4-9. DZ Kaneohe Bay



Figure 4-10. DZ Tiger Shark

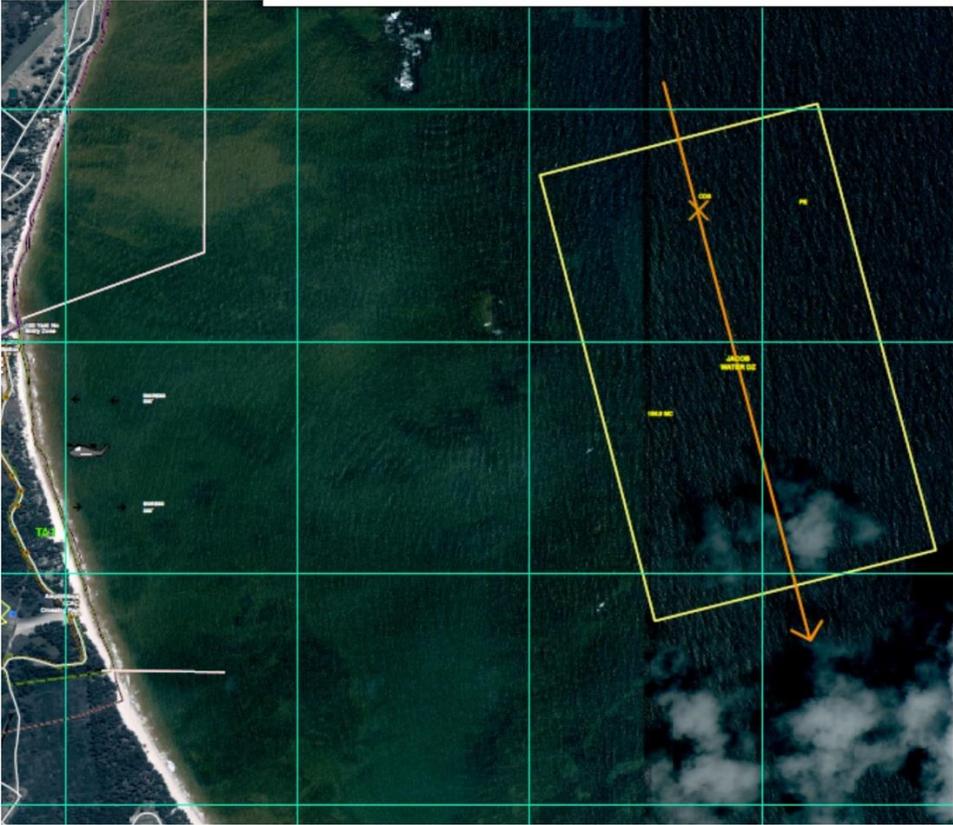


Figure 4-11. DZ Jacobs

10. Transit Routes And Restrictions

a. MCBH. For detailed information concerning routes and restrictions, refer to reference (p).

b. MCTAB

(1) Ingress and egress for all helicopters is seaward and within the confines of TA 1. Designated ingress altitude is 300 ft. AGL; designated egress altitude is 100 ft. AGL. Additionally, helicopters must stay within the confines of TAs 2 and 3. Over-flights of adjacent areas are not authorized.

(2) SVFR are not authorized. It is recommended that units not resident to MCBH employ a Forward Air Controller (FAC), Air Liaison Officer (ALO) or personnel to provide ITG to control helicopters within MCTAB. FAC, ALO or ITG teams will be responsible for:

(3) Conducting a visual inspection of the operating area and LZ(s) to determine if conditions are safe for helicopter training.

(4) Establishing radio communications and provide estimated wind direction and velocity, and wave-off/abort if a hazardous situation develops.

(5) Every effort will be made to maximize safety and minimize noise (rotor) and other disturbances to the surrounding military and civilian community.

c. Refer to reference (p) for complete descriptions of airfield operations and restrictions.

11. MCTAB Aircraft Flight Patterns. Figures 4-12 through 4-18 depict flight patterns for aircraft at MCTAB. The solid lines represent helicopter flight patterns, and the dashed lines represent MV22 flight patterns.

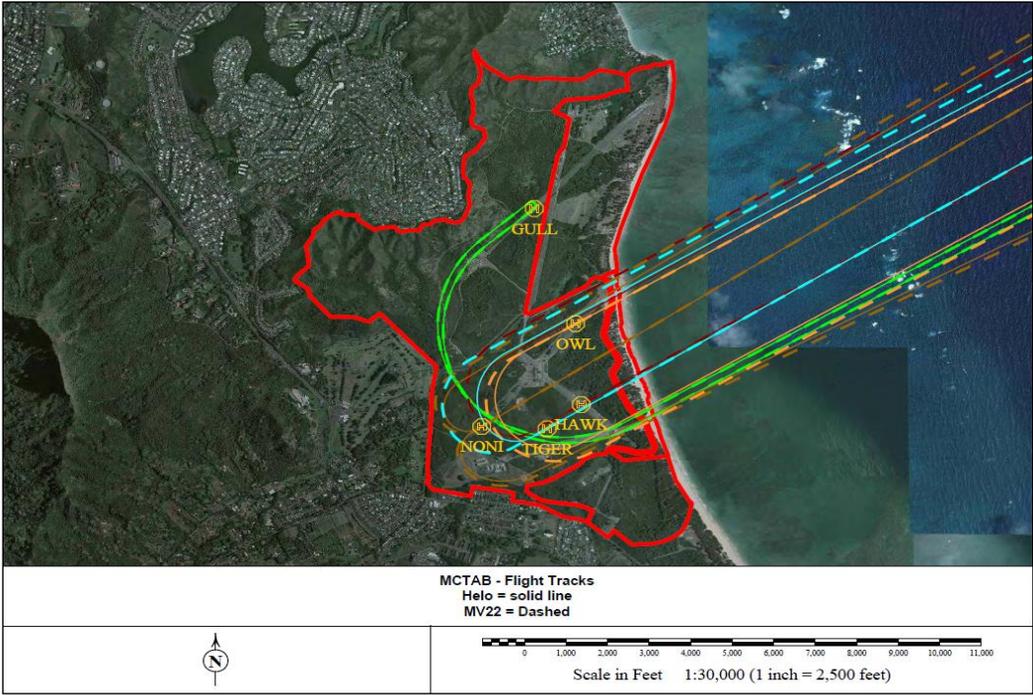


Figure 4-12. MCTAB Flight Tracks

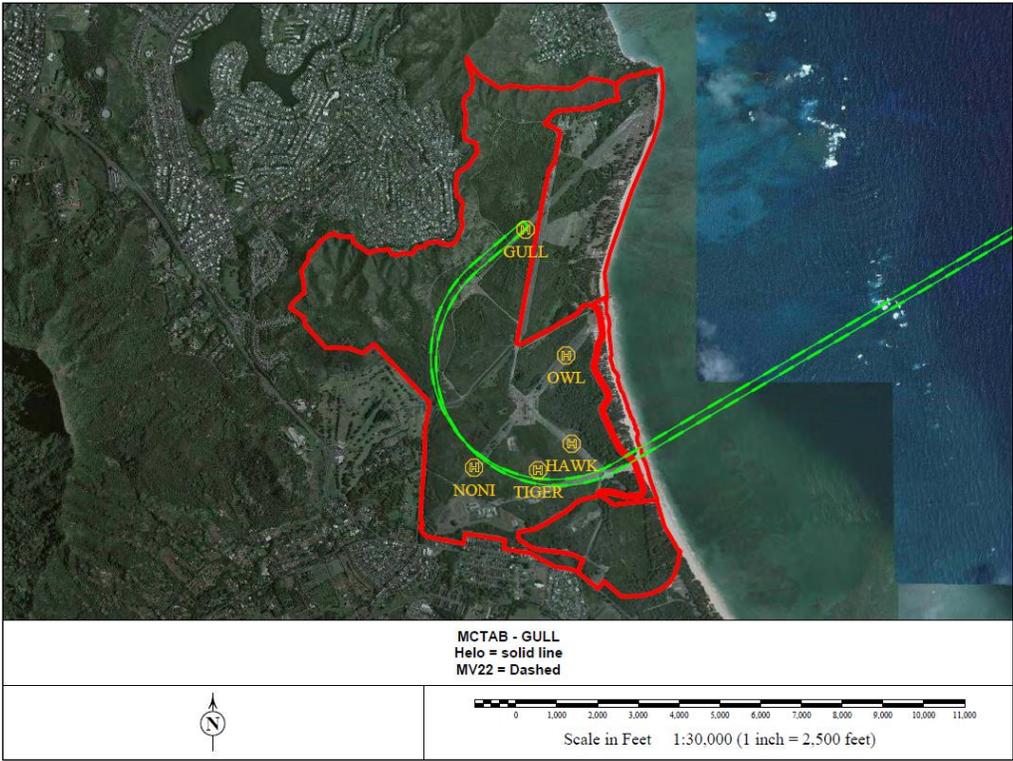


Figure 4-13. MCTAB Gull Flight Patterns



Figure 4-14. MCTAB Hawk Flight Patterns

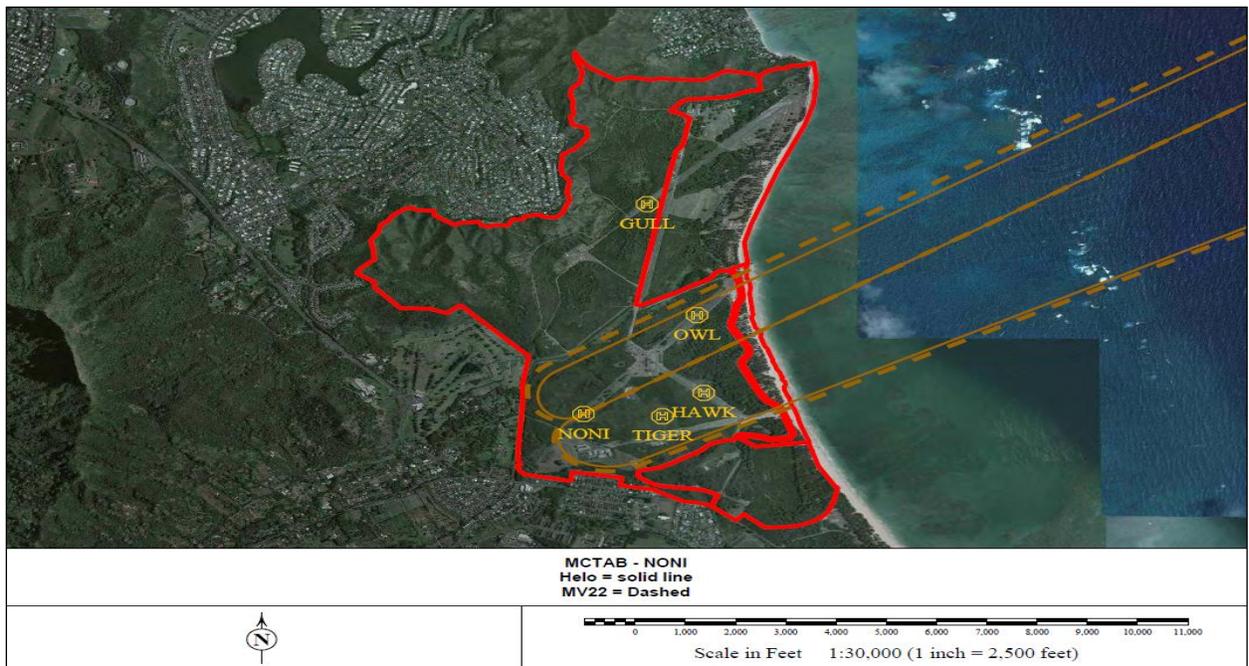


Figure 4-15. MCTAB Noni Flight Patterns

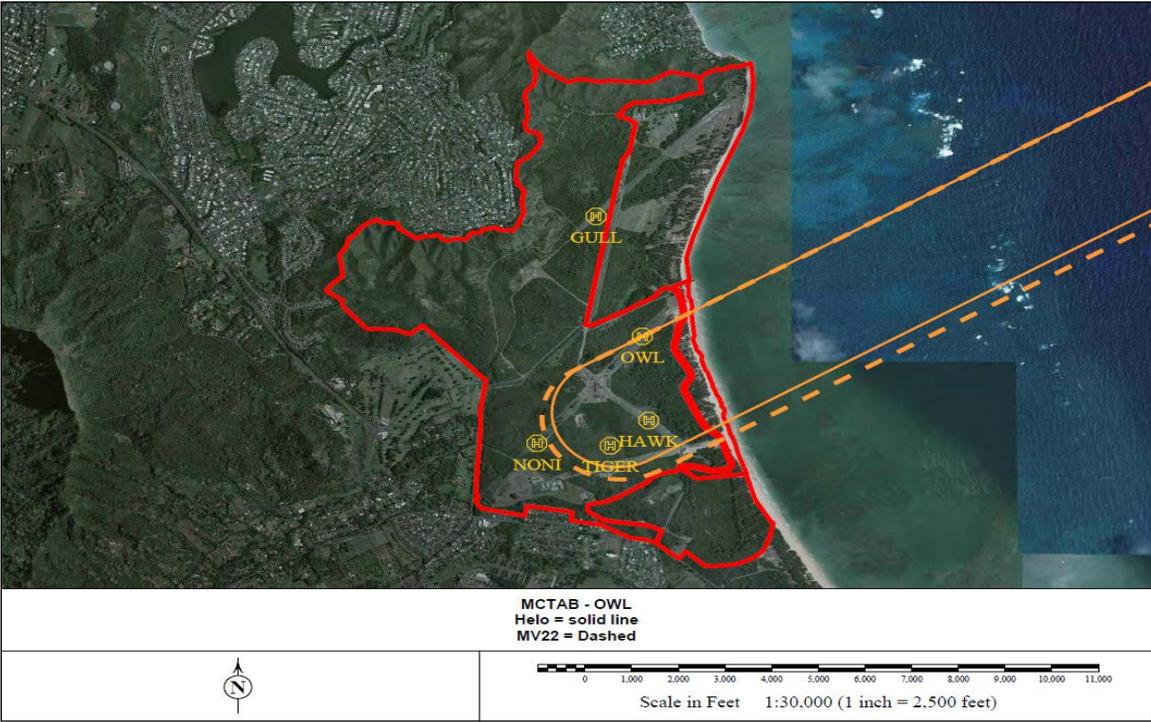


Figure 4-16. MCTAB Owl Flight Patterns

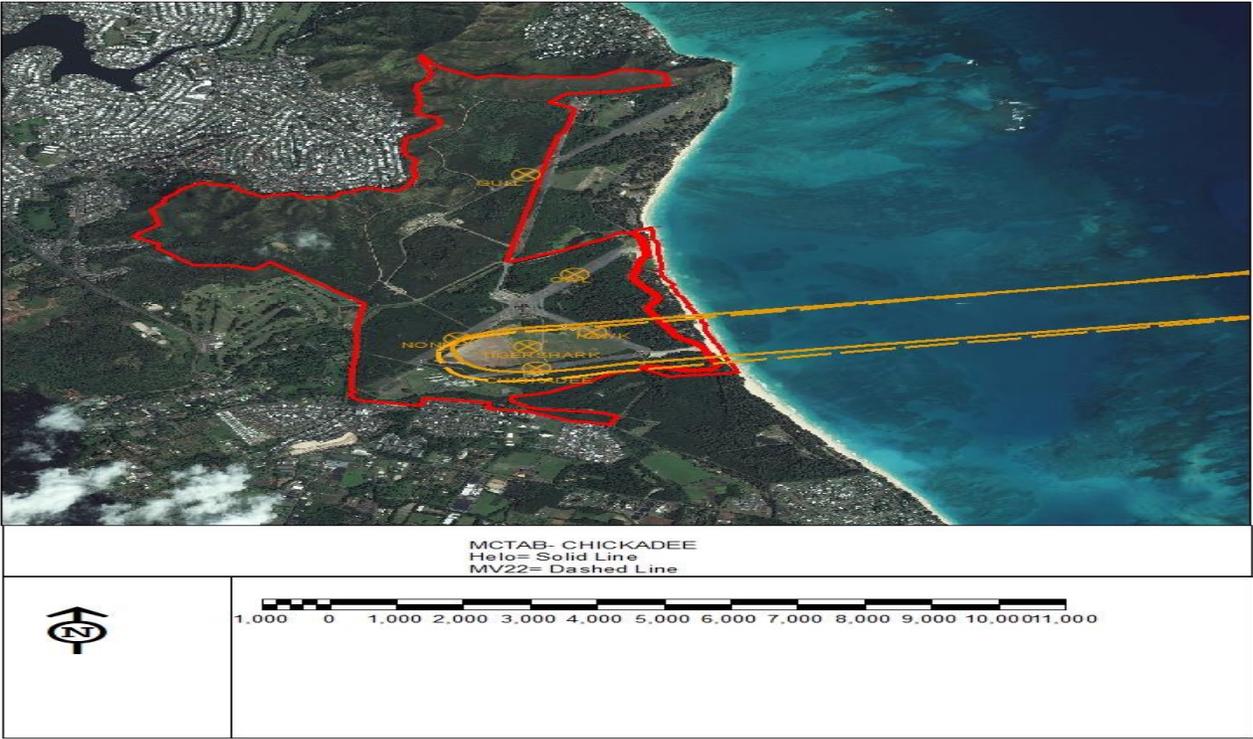


Figure 4-17. MCTAB Chickadee Flight Patterns

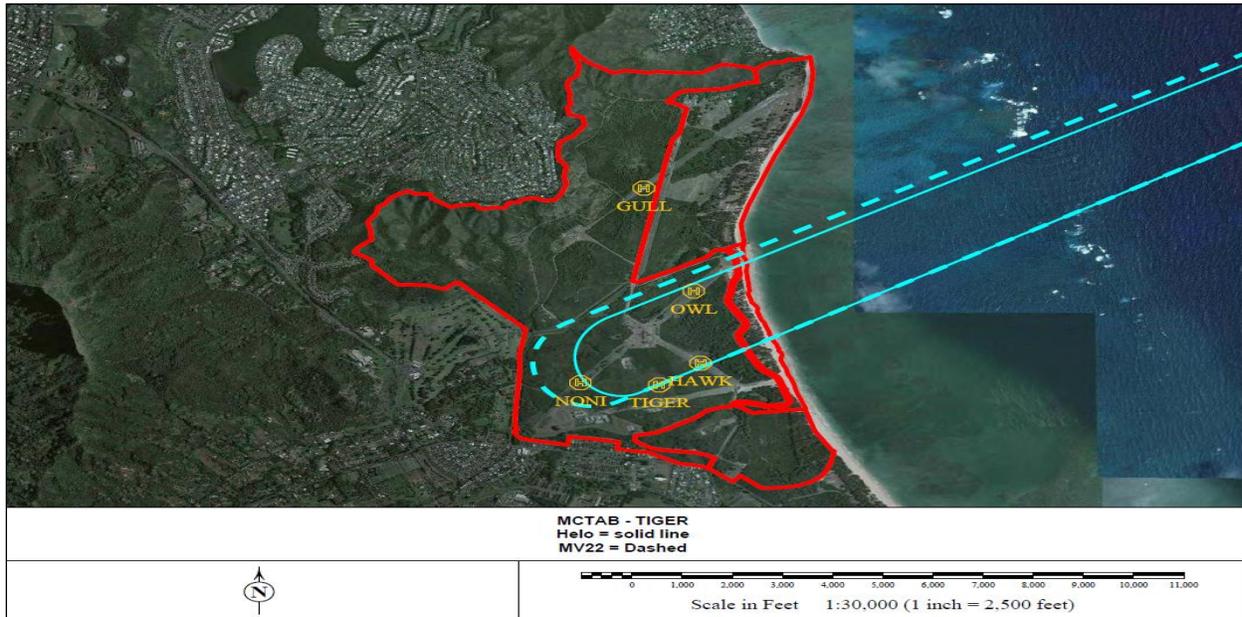


Figure 4-18. MCTAB Tiger shark Flight Patterns

12. Night Vision Devices. Night Vision Device(s) (NVDs) operations shall be conducted IAW all Navy, Marine Corps and applicable Service Directives, as well as the provisions set forth in reference (p), MCASO 3710.2.

13. Unmanned Aerial System / Small Unmanned Aerial System Operations

a. UAS Operations. UAS/sUAS operations will be conducted IAW all DoD, Navy, Marine Corps and applicable Service Directives. A detailed description of UAS operations and procedures can be found in Appendix N of this Order. MCBH does not have restricted airspace and all UAS flights will be conducted within the National Airspace System controlled by the FAA.

b. Description of Flight Operations. UAS flight operations may be conducted in the MCBH / MCTAB airspace provided the proponents have an approved Certificate of Authorization (COA) or waiver from FAA. Group 1 UAS may operate within DOD designated airspace if the proponent has an approved Airspace Access Authorization (AAA) approved by the Western Service Area (WSA) Naval Representative Office (NAVREP). When the proponent obtains a COA or AAA a Letter of Agreement (LOA) will be generated and signed by the proponents CO, CO of MCAS, and the Installation RCO. UAS operations will be scheduled in RFMSS and a Notice to Airman NTM is required to be filed NLT 30 minutes prior to flight and NET 72 hours.

c. Operation Limitations. All operations will be IAW current FAA issued COA or AAA that is issued for the specific UAS to be operated.

d. Method of Pilotage. Only trained and qualified UAS operators will pilot the vehicle using pre-assigned Global Positioning System waypoints via an on-board auto-pilot that can be updated by a ground station. One pilot (operator) and one observer are required for operation. The pilot (operator)

and observer cannot be the same person. The pilot (operator) and observer qualifications, other than Marine Corps standards, are established by the FAA and delineated in the COA.

e. Coordination and Scheduling. UAS flights will be scheduled in RFMSS Range Management / Scheduler will coordinate with MCAS flight planning no earlier than 72 hours and NLT 30 minutes prior to the operation of the UAS and request a Distance Notice to Airmen (D-NOTAM) when UAS operations are being conducted. All UAS operations will be scheduled in RFMSS in coordination with MCAS and MCBH, S-3.

f. Emergencies. In the event of an emergency including, a loss of communications with the UAS or interloping aircraft, the operating unit will terminate UAS operations immediately. The UAS operator will notify the Host Command Facility (HCF) and MCAS Operations within one hour of termination of flight operations.

g. Communications Procedures. Each UAS flight area requires specific communications procedures. See Appendix N for information and requirements.

h. Pilot-In-Command (PIC). The PIC is the person directly responsible for the operation of the UAS. One PIC must be designated at all times and is responsible for the safety of the UAS and all persons and property along the UA flight path. The UAS pilot will be held accountable for controlling their aircraft to the same standards as the pilot of the manned aircraft.

i. Route and Altitude Procedures. Appendix N contains information regarding designated boundaries and information regarding provisions of acceptable mitigation.

j. Safety Provisions. IAW 14 CFR Part 91, General Operating and Flight Rules, Subpart J-Waivers, 91.903, Policy and Procedures, the following provisions provide acceptable mitigation of 14 CFR Part 91.113 and must be complied with. For more details and safety provisions, see Appendix N.

k. Airworthiness Certification Provisions. UAS must be shown to be airworthy to conduct flight operations in the National Airspace System (NAS). Public Use Aircraft applications must contain one of the documents outlined in Appendix N.

l. Pilot/Observer Provisions. All pilot/observer qualifications, PIC and Pilot proficiency VFR, PIC Responsibilities and Pilot/ATC Instructions can be found in Appendix N.

m. Special Provisions. Appendix N lists all special provisions. All personnel connected with this UAS operation shall comply with the contents of this authorization and its special provisions.

n. Incident/Accident Reporting. Appendix N contains important information required to document unusual occurrences associated with UAS activities in the NAS.

o. A COA or AAA. Does not, in itself, waive any federal aviation regulation nor any state law or local ordinance. Should the proposed

operation conflict with any state law or local ordinance, or require permission of local authorities or property owners, it is the responsibility of the USMC to resolve the matter.

p. FAA. Anytime the FAA determines that the UAS operations do not comply with the provisions set forth in this agreement, the FAA may suspend COAs or AAA authorization until the issues can be resolved.

q. MCAS and MCTAB UAS Operating Areas. The USMC is hereby authorized to operate UAS IAW approved COA/AAA in the Operations Area are depicted in Figures 4-18 and 4-19.

14. Notice To Airman

a. Information required for a Notice to Airman (NOTAM) will be collected by the MCBH, S-3 and submitted to the MCAS Manager for release.

b. The required information must be submitted no earlier than 72 hours, no later than 30 minutes prior to the conduct of air operations.

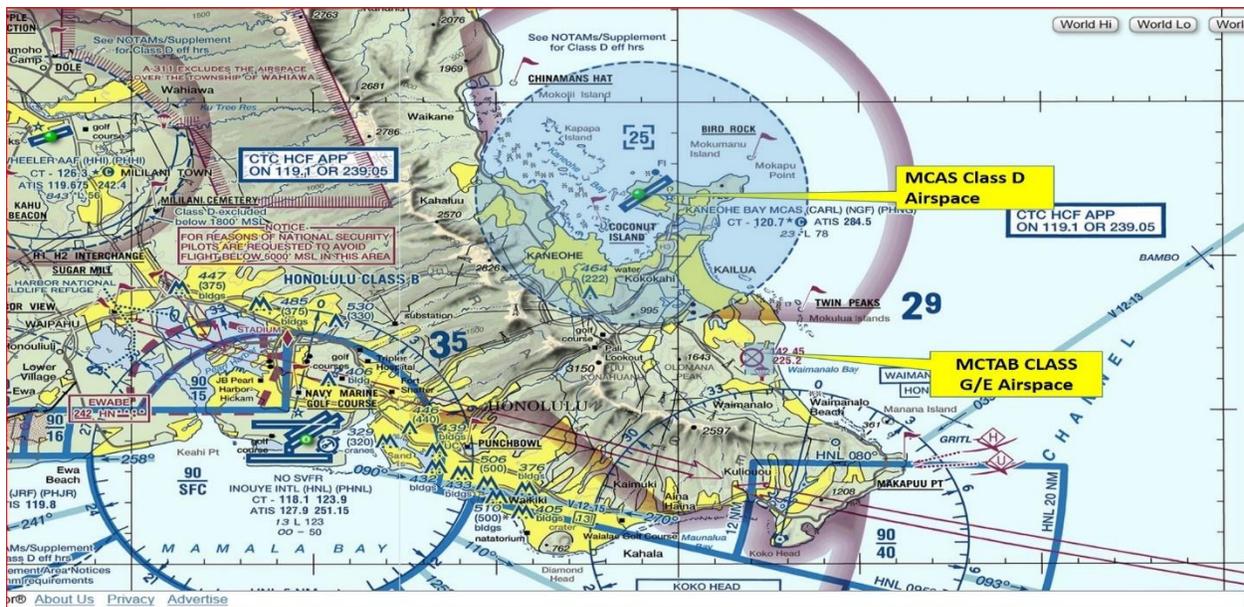


Figure 4-19. MCAS/MCTAB UAS/sUAS Operating Areas

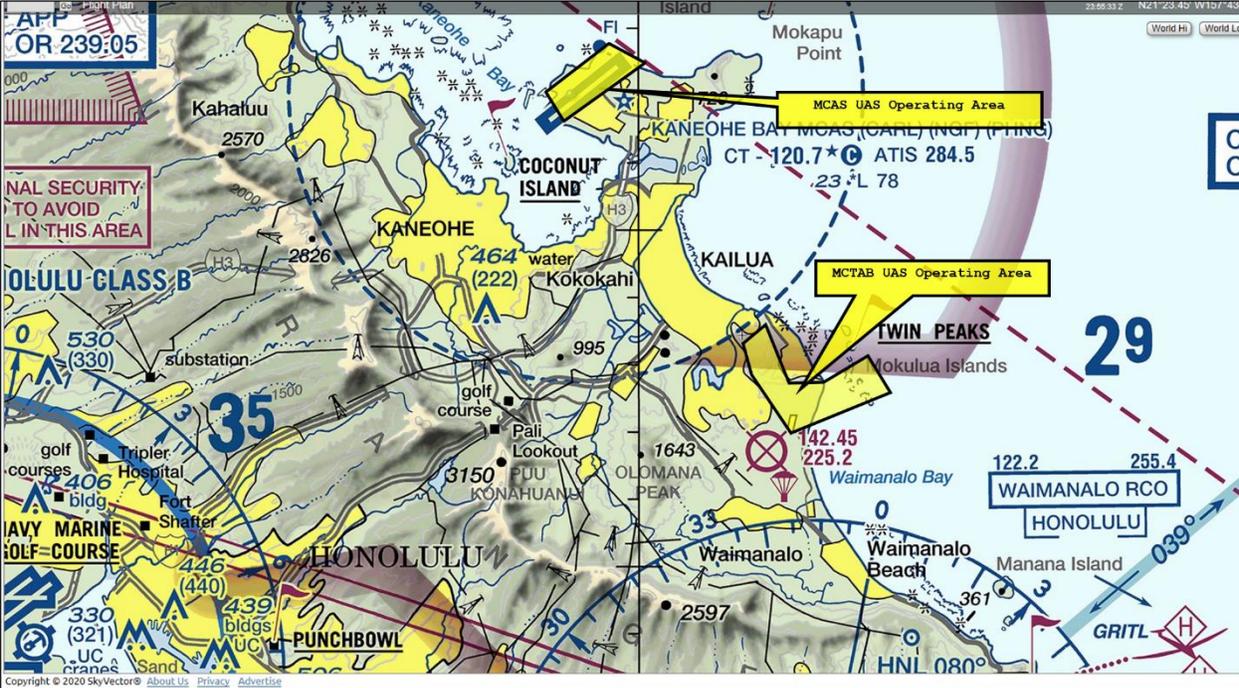


Figure 4-20. MCTAB UAS Operating Area

Chapter 5

Maritime Operations

1. General

a. MCBH, Kaneohe Bay is located on Mokapu Peninsula, Oahu, Hawaii and consists of approximately 2,951 acres. It is surrounded by wildlife sanctuaries and endangered species that make the Mokapu Peninsula their home. In collaboration with the Base's Environmental Department, maneuver training and maritime operations are authorized on certain ranges and training facilities.

b. MCTAB also offers amphibious assault training, even with endangered species living in the surrounding waters. It is essential for every person training to take extra precautions when conducting maritime operations in our surrounding waters.

c. Pu'uloa RTF beach area provides an excellent opportunity for units to conduct amphibious training and has been established as a Beach Landing Site (BLS) when live-fire training is not scheduled.

2. Amphibious Assault Training Areas

a. Amphibious Assault Training Area(s) (AATAs) are defined as TAs that allow access to watercraft vehicles from the ocean to land. They are used for amphibious operations, dive, and parachute operations.

b. The following types of craft are permitted on most AATAs: an Assault Amphibian Vehicle (AAV), a Light Armored Vehicle, LCACs, and Combat Rubber Raiding Craft (CRRC).

c. AATAs are categorized as CLZs and BLSs. Paragraph 3 contains a brief description.

d. No live-fire is permitted in any of the AATAs.

e. AATAs are located on beaches that double as base and public recreational use beaches when they are not used for training. To sustain these resources it is imperative that the regulations contained in this order be adhered to.

f. Refer to Chapter 3 of this Order for all AATA scheduling requests.

3. Craft Landing Zones

a. Watercraft vehicles are restricted in their ability to maneuver when operating in the surrounding waters of MCBH.

b. When departing from or returning to the CLZs, it is imperative that commanders abide by the provisions set forth in this Order and reference (m).

c. For safety purposes, it is imperative that no vehicles, watercraft (other than WFO support), or pedestrians move to within 100 meters of moving

watercraft, other than those personnel participating in the training exercise.

4. Craft Landing Zone Fort Hase

a. Fort Hase Beach is located aboard MCBH, Kaneohe Bay and has been established as a CLZ. The location of CLZ Fort Hase is depicted in Figure 5-1.

b. The beaches aboard MCBH provide an excellent opportunity for forces to conduct waterborne movements. Fort Hase is a suitable beach for landing AAVs. The landing beach at Fort Hase is limited in space and does not allow for a full AAV Platoon (12 AAVs) to land or launch online at one time. Landing at Fort Hase can be conducted in waves of one AAV section online at a time (three to four AAVs). In this manner, an entire Infantry Company can be landed in three to four waves. AAVs are restricted to tank trails while maneuvering between Fort Hase and LZ Boondocker, and are required to stay out of vegetation.

c. Training units' safety, RM, weather, and surf restrictions remain the training unit commander's responsibility.

d. MCBH S-3 will notify Water Front Operations (WFO) of any scheduled waterborne training and request safety boat support.

e. The Housing Office will be notified of any scheduled training at CLZ Fort Hase so that MCBH residents may be notified. OIC/RSO are responsible for keeping BLS clear of unauthorized persons.

f. During amphibious landings or withdrawals, all waterborne vehicles/craft will remain within the surveyed portion of the beach. The training unit is required to provide ITG. Subsequent inland movement of vehicles may be accessed through the current tank trails.

g. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit. Tracked vehicles must rake the beach sand so track marks are smoothed over.

h. Disembarking troops must remain 500 ft. from any residential area. Personnel engaged in a training activity will remain within their designated TAs. Movement of troops will be by prescribed routes.

i. CLZ Fort Hase has cultural and historical significance and needs to be well cared for. Absolutely no digging is permitted.

j. The native vegetation along the beach and dunes is a valuable erosion buffer and must be left undisturbed. No vehicles are allowed in the vegetation.

k. Under no circumstances is live-fire training permitted aboard MCBH at CLZ Fort Hase. The use of any type of "tear" or "riot control" gas is prohibited. Immediately notify MCBH Range Control at (808) 257-3180 if any explosive ordnance item is discovered during training.

l. Safety pyrotechnics include G950 red smoke, L306 red star and L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.

m. The training unit commander will immediately report any damage to TA property or facility caused by personnel or vehicles to Range Control. Units will make best effort to repair all damage to the requested TA within three business days. Coordination will be made with Range Control to inspect the repairs.

n. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 and Environmental Department. Containment, cleanup and reporting of HAZMAT related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.

o. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The using unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.

p. Requests to utilize CLZ Fort Hase must be submitted through RFMSS. The MCBH, S-3 RTAM will have final approval for the use of CLZ Fort Hase.

q. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.



Figure 5-1. Fort Hase CLZ. Dotted red lines represent the CLZ. Solid dark red line represents the current tank trails and approved AAV ingress route.

5. Craft Landing Zone Hale Koa

a. Hale Koa Beach is located aboard MCBH, Kaneohe Bay. The location of CLZ Hale Koa is detailed in Figure 5-2.

b. The beaches aboard MCBH provide an excellent opportunity for forces to conduct waterborne movements. Hale Koa Beach provides the entrance to LZ Westfield and is a suitable landing site for LCACs only. No other craft is authorized at CLZ Hale Koa. The beach exit area is 60 yards wide. From offshore, the right flank is easily distinguishable by the beginning of the tree line. The left flank is covered with large rocks that will create problems on beach exits. The surf does not pose any obstacles on this beach because the outlying reef diminishes most incoming wave action down to less than a 1 ft. average.

c. Waterborne units' safety, RM, weather, surf restrictions remain the training unit commander's responsibility.

d. MCBH S-3 will notify WFO of any scheduled waterborne training and request safety boat support. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District.

e. Prior to approval to utilize CLZ Hale Koa coordination with MCAS operations is vital. When the ordnance assembly area (OAA) is being utilized Hale Koa CLZ is closed out and vice versa. OIC/RSO is responsible to keep beach visitors away from the training site.

f. During amphibious landings or withdrawals, all waterborne vehicles/craft will remain within the surveyed portion of the beach. The training unit is required to provide ITG.

g. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit. A FOD walk of the simulated ship deck at LZ Westfield will need to be conducted after the arrival and departure of LCACs.

h. Disembarking troops must remain 500 ft. from runways. Personnel engaged in a training activity will remain within their designated TAs. Movement of troops will be by prescribed routes. Unit movement on foot may be conducted across the runway at Mokapu road, with prior approval from MCBH S-3 and MCAS.

i. Due to a risk of striking underground utilities, absolutely no digging is permitted.

j. Under no circumstances is live-fire training permitted aboard MCBH at CLZ Hale Koa Beach. The use of any type of "tear" or "riot control" gas is prohibited. Immediately notify MCBH Range Control at (808) 257-3180 if any explosive ordnance item is discovered during training.

k. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.

l. The training unit commander will immediately report any damage to TA property or facility caused by personnel or vehicles to Range Control. Units will make best effort to repair all damage to the requested TA within three business days. Coordination will be made with Range Control to inspect the repairs.

m. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 and Environmental Department. Containment, cleanup, and reporting of HAZMAT related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.

n. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The using unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.

o. Requests to utilize CLZ Hale Koa Beach must be submitted through RFMSS. The MCBH, S-3 will have final approval for use of CLZ Hale Koa Beach.

p. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time, the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.



Figure 5-2. CLZ Hale Koa Beach

6. Craft Landing Zone Pyramid Rock

a. Pyramid Rock Beach is located aboard MCBH, Kaneohe Bay and has been established as a CLZ. The location of CLZ Pyramid Rock is depicted in Figure 5-3.

b. The beaches aboard MCBH provide an excellent opportunity for forces to conduct waterborne movements. Pyramid Rock Beach is a suitable beach for landing AAVs. Pyramid Rock allows for a full AAV Platoon (12 AAVs) to land online at one time. Landing at Pyramid Rock Beach can be conducted in waves of one AAV section online at a time (three to four AAVs). AAVs are restricted to the beach only and are required to stay out of vegetation. There is a trail that leads off the beach and onto Mokapu road for motor marching.

c. Training units' safety, RM, weather, and surf restrictions remain the training unit commander's responsibility.

d. MCBH, S-3 will notify WFO of any scheduled waterborne training and request safety boat support. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District.

e. MCCA will be notified by S-3 RTAM of any scheduled training at CLZ Pyramid Rock Beach. MCCA is responsible for informing beach cottage residents and the aquatics director of the scheduled training. OIC/RSO is responsible to keep non-participating personnel away from the training site.

f. During amphibious landings or withdrawals, all waterborne vehicles/craft will remain within the surveyed portion of the beach. The training unit is required to provide ITG. Subsequent inland movement of vehicles may be accessed through the current lifeguard vehicle access.

g. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit. Tracked vehicles must rake the beach sand so track marks are smoothed over.

h. Disembarking troops must remain 500 ft. from any runway/taxiway. Personnel engaged in a training activity will remain within their designated TAs and movement of troops will be by prescribed routes.

i. CLZ Pyramid Rock has cultural and historical significance and needs to be well cared for. Absolutely no digging is permitted.

j. The vegetation along the beach and dunes is a valuable erosion buffer and must be left undisturbed. No vehicles are allowed in the vegetation. Dismounted troops will utilize existing marked lanes to transit from the CLZ/BLS to the objective. The trails are well marked.

k. Under no circumstances is live-fire training permitted aboard MCBH at CLZ Pyramid Rock. The use of any type of "tear" or "riot control" gas is prohibited. Blank ammunition and pyrotechnics are limited to use in the Pyramid Rock TA and must be included on the "Pyro Request" in Appendix O and submitted through Range Control. The following munitions are permitted in the Pyramid Rock TA:

- (1) A080 5.56 blank.
- (2) A075 5.56 blank link.
- (3) A111 7.62 blank link.
- (4) A598 .50 cal. blank link.
- (5) G930 smoke white.
- (6) G940 smoke green.
- (7) G945 smoke yellow.
- (8) LX21 SMAW simulators.
- (9) L592 Tow simulator.
- (10) L594 Arty simulator (flash bang).
- (11) L598 flash bang M177.
- (12) L599 illumination trip flare M118.

l. All other blank ammunition and pyrotechnic devices may be approved by the MCBH, S-3 RTAM on a case by case basis. Units will list all proposed devices on the RFMSS request.

m. Use of smoke grenades is permitted in the pyramid rock TA. To prevent a fire, smoke grenades will be employed in an appropriate containment device (i.e., an empty ammunition can).

n. Do not leave any expended/unexpended blank or simulated ordnance. It is the responsibility of the training unit commander to ensure that all training materials are removed from the TAs after each exercise. Immediately notify the MCBH Range Control at (808) 257-3180 if any explosive ordnance item is discovered during an exercise.

o. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.

p. The using unit commander will immediately report any damage to TA property or facility caused by personnel or vehicles to Range Control. Units will make best effort to repair all damage to the requested TA within three business days. Coordination will be made with Range Control to inspect the repairs.

q. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 and Environmental Department. Containment, cleanup, and reporting of HAZMAT related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.

r. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The training unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.

s. Requests to utilize CLZ Pyramid Rock must be submitted through RFMSS. Use of CLZ Pyramid Rock Beach during the weekend will be scheduled on a case-by-case basis. The MCBH, S-3 RTAM will have final approval for use of CLZ Pyramid Rock Beach.

t. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time, the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

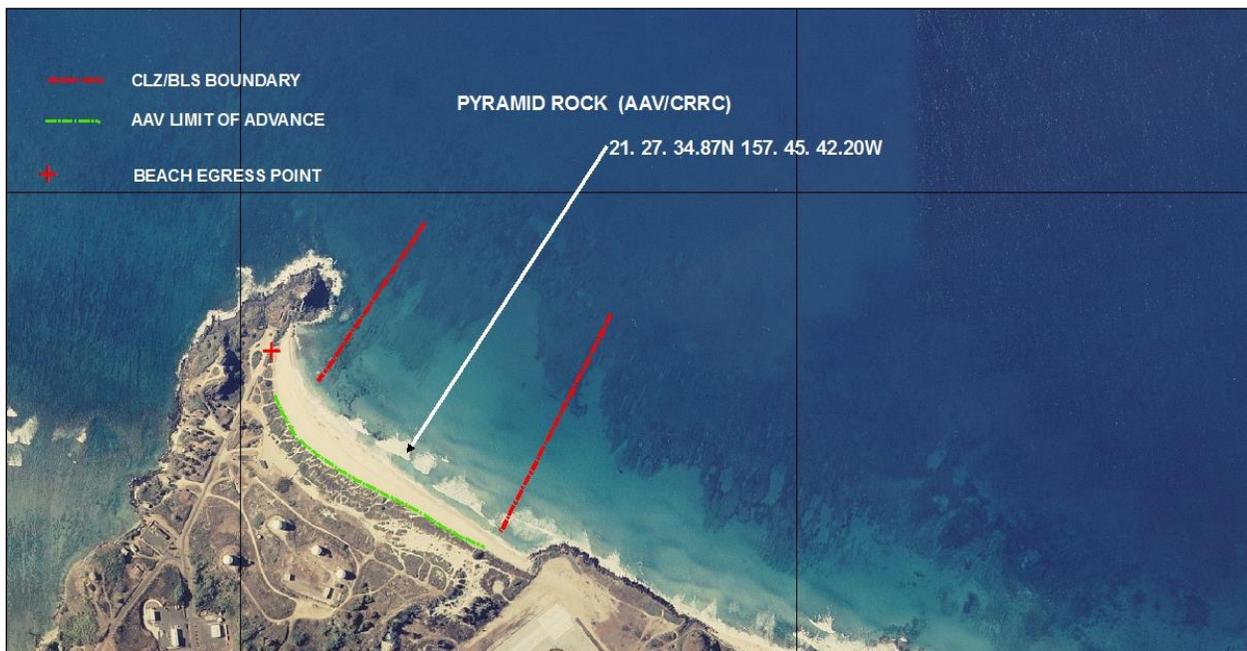


Figure 5-3. CLZ Pyramid Rock

7. Craft Landing Zone Pacific War Memorial

a. The Pacific War Memorial (PWM) is located aboard MCBH, Kaneohe Bay and its adjacent beach has been established as a CLZ. The location of CLZ PWM is detailed in Figure 5-4.

b. The beaches aboard MCBH provide an excellent opportunity for forces to conduct waterborne movements. The PWM is a suitable beach for landing AAVs. The landing beach at PWM is limited in space and does not allow for a full AAV Platoon (12 AAVs) to land online at one time. Landing at PWM must be conducted one AAV at a time. AAVs are restricted to tank trails while maneuvering from PWM and are required to stay out of vegetation.

c. Training units' safety, RM, weather, and surf restrictions remain the training unit commander's responsibility.

d. MCBH, S-3 will notify WFO of any scheduled waterborne training and request safety boat support. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District.



Figure 5-4. Pyramid Rock Training Area

e. MCBH, S-3 will notify WFO of any scheduled waterborne training and request safety boat support. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District.

f. OIC/RSO is responsible to keep non-participating personnel away from the training site.

- g. During amphibious landings or withdrawals, all waterborne vehicles/craft will remain within the surveyed portion of the beach. The training unit is required to provide ITG. Subsequent inland movement of vehicles may be accessed through the current tank trails.
- h. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit. Tracked vehicles must rake the beach sand so track marks are smoothed over.
- i. Disembarking troops must remain away from any ceremonies or the displays. Personnel engaged in a training activity will remain within their designated TA(s). Movement of troops will be by prescribed routes.
- j. CLZ PWM has cultural and historical significance and needs to be well cared for. Absolutely no digging is permitted.
- k. The vegetation along the beach and dunes is a valuable erosion buffer and must be left undisturbed. No vehicles are allowed in the vegetation.
- l. Under no circumstances is live-fire training permitted aboard MCBH CLZ PWM. The use of any type of "tear" or "riot control" gas is prohibited. Immediately notify MCBH Range Control at (808) 257-3180 if any explosive ordnance item is discovered during training.
- m. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.
- n. The training unit commander will immediately report any damage to TA property or facility caused by personnel or vehicles to Range Control. Units will make best effort to repair all damage to the requested TA within three business days. Coordination will be made with Range Control to inspect the repairs.
- o. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 Directorate and Environmental Department. Containment, cleanup, and reporting of HAZMAT-related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.
- p. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The training unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.
- q. Requests to utilize CLZ PWM must be submitted through RFMSS. The MCBH, S-3 will have final approval for use of CLZ PWM.
- r. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.



Figure 5-5. CLZ PWM

8. Cliff Assault BLS KBRTC

a. The Cliff Assault BLS (CA BLS) is located aboard MCBH, Kaneohe Bay on the West Side of the Ulupau Crater, MGRS 04QFJ 3087073152. The site has been established as a BLS primarily for Scout Swimmer, Marine Reconnaissance Vessel (MRV) and Combat Rubber Raider Craft (CRRC). The location of CA BLS detailed in Figure 5-6.

b. This BLS provides an excellent opportunity for experienced waterborne forces to conduct clandestine inserts and extracts. The CA BLS is suitable beach for swimmers, MRVs and CRRC only. The landing beach is very small and subject to dangerous surf. Extreme caution should be used when planning the use of this location.

c. Training units' safety, RM, weather, and surf restrictions remain the training unit commander's responsibility.

d. MCBH, S-3 will notify WFO of any scheduled waterborne training.

- e. OIC/RSO is responsible to keep non-participating personnel away from the training site.
- f. During extracts or inserts, all watercraft will remain within the surveyed portion of the beach. Subsequent inland movement will be foot traffic only.
- g. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit.
- h. Under no circumstances is live-fire training permitted aboard CA BLS. The use of any type of "tear" or "riot control" gas is prohibited. Immediately notify MCBH Range Control at (808) 257-3180 if any explosive ordnance item is discovered during training.
- i. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.
- j. The training unit commander will immediately report any damage to TA property or facility caused by personnel or vehicles to Range Control. Units will make best effort to repair all damage to the requested TA within three business days. Coordination will be made with Range Control to inspect the repairs.
- k. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 Directorate and Environmental Department. Containment, cleanup, and reporting of HAZMAT-related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.
- l. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The training unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.
- m. Requests to utilize CA BLS must be submitted through RFMSS.
- n. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

9. Craft Landing Zone MCTAB

- a. CLZ MCTAB is located aboard MCTAB and has been established as a CLZ. The location of CLZ MCTAB is detailed in Figure 5-7.
- b. The beaches aboard MCTAB provide an excellent opportunity for forces to conduct waterborne movements. MCTAB provides a suitable beach for landing AAVs, LCU, LCAC, CRRC or surface swimmers. The area is fronting north to northeast. There are generally winds that make surface conditions choppy at

times, but with the minimal average shore break of 4 ft. This should have no effect on any type of landings. There are no known obstacles located in the water area surveyed. On the right flank of the beach on the shore, there is a rock wall jetty extending 65 ft. out into the water. A stream runoff is also located at this jetty. All hinterland area is suitable for the staging of landing craft; however, scattered trees will need to be negotiated for maneuver into the hinterland TAs. There is one area approximately 100 to 150 yards to the right of center beach where LCACs can maneuver up into the hinterland and shutdown. The landing beach at MCTAB can accommodate a full AAV Platoon (12 AAVs) to land online at one time. Landing at CLZ MCTAB and maneuvering into TA 2 may be accomplished by crossing Tinker Road at designated areas. Training unit must provide road guards.



Figure 5-6. CA BLS KBRTC

c. Landing of amphibious vehicles on the beach are authorized within TA 1 and subsequent inland movement of vehicles and troops by prescribed routes to TA 2. Training units' safety, RM, weather, and surf restrictions remain the training unit commander's responsibility.

d. MCBH, S-3 will notify WFO of any scheduled waterborne training and request safety boat support. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District.

- e. During amphibious landings or withdrawals, all waterborne vehicles/craft will remain within the surveyed portion of the beach. The training unit is required to provide ITG.
- f. At the termination of a training exercise, the beach sand will be restored to its original condition by the training unit. Tracked vehicles must rake the beach sand so track marks are smoothed over.
- g. Under no circumstances is live-fire training permitted aboard MCTAB. TA 1 is a non-firing area.
- h. Use of any type of "tear" or "riot control" gas is prohibited.
- i. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star, and signal marine distress. These items will not be used unless required due to an emergency.
- j. Do not leave any expended/unexpended blank or simulated ordnance. It is the responsibility of the training unit commander to ensure that all training materials are removed from the TAs after each exercise. Immediately notify MCBH Range Control at (808) 257-3180, if any explosive ordnance item is discovered during an exercise.
- k. TA 1 is closed from 1200 Friday to 0800 Monday, IOT allow public access and use of the beach. This closure is also effective on designated city, state and federal holidays. Training on weekends may be approved on a case-by-case basis. A request for training on weekends must be submitted 60 days in advance to allow for public notification.
- l. MCTAB contains numerous environmentally sensitive areas. The USMC is legally responsible for ensuring that cultural and natural resources are protected and preserved.
- m. Training activities that fall outside the scope of the "Final Environmental Impact Statement, Land Use and Development Plan for Bellows Air Force Station" of December 1995 are not permitted at MCTAB.
- n. Digging and other disturbances of ground surface and/or subsurface are limited to 6 in. Cutting of any trees or tree limbs is prohibited.
- o. Waimanalo Stream is designated as a Fish and Wildlife Conservation Area and is an established wildlife sanctuary. No training is allowed within or adjacent to Waimanalo Stream IOT safeguard human health and prevent interference with environmental restoration initiatives.
- p. Use of detergents or chemicals is not allowed. Cleaning or maintenance of motor vehicles or machinery is prohibited in all TAs.
- q. Any accidental fuel spills or other HAZMAT related incidents must be immediately reported to MCBH Range Control at (808) 257-3180. Range Control will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 and Environmental Department. Containment, cleanup, and reporting of HAZMAT-related incidents will be performed IAW EPA, DOD, and USMC procedures and directives.

r. Should a monk seal or sea turtle be discovered "beached", all activity in the immediate vicinity (150 ft. away from the animal) must cease. The training unit will immediately contact MCBH Range Control at (808) 257-3180. Disturbing, touching, or harassing an endangered species is a violation of federal law.

s. Requests to utilize CLZ MCTAB must be submitted through RFMSS. The MCBH S-3 RTAM will have final approval for use of CLZ MCTAB.

t. Prior to commencement of training, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time, the individual responsible for the TA will receive a map depicting the TA requested and an update on any pertinent information. The same individual will return the TA map to Range Control at the conclusion of training.

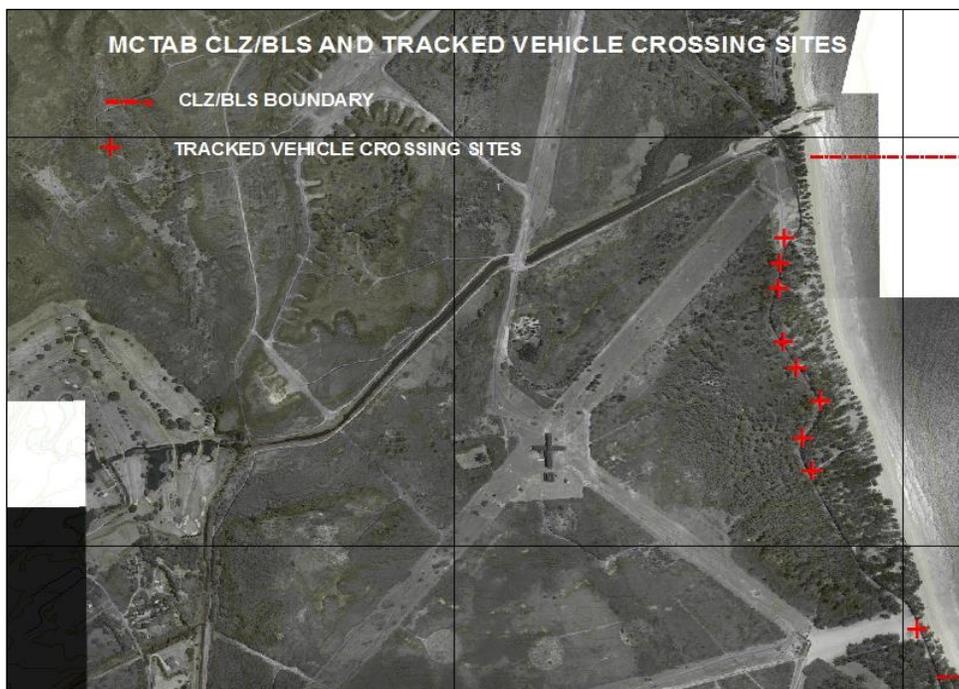


Figure 5-7. CLZ/BLS MCTAB

10. Beach Landing Site Pu'uloa RTF

a. The beach located at the Pu'uloa RTF provides an excellent opportunity for units to conduct amphibious training. BLS Pu'uloa is best suited for CRRC or surface swimmers. There are no known obstacles located in the water area surveyed. The right flank of the beach boundary is adjacent with Ewa Beach Park. The left flank of the beach is adjacent to the Waterfront at Pu'uloa residents' beach. The location of BLS Pu'uloa is detailed in Figure 5-8.

b. Prior to commencement of training, an OIC/RSO from the training unit will report to Pu'uloa Range RTF Range Control office, to sign for the training area. At this time, the individual responsible for the training area will receive a map depicting the training area requested and any

pertinent information required to conduct training. The same individual will return the training area map to Pu'uloa Range Control Office at the conclusion of training.

c. MCBH, S-3 will notify Pu'uloa RTF of any scheduled amphibious training. A Notification to Mariners will be submitted to the Commander 14th Coast Guard District. During amphibious training, all waterborne craft will remain within the surveyed portion of the beach. The training unit is required to provide Initial Terminal Guidance.

d. At the termination of a training exercise, the beach sand will be recovered to its original condition by the using unit.

e. Under no circumstances is live-fire training permitted within the BLS. Firing of blank ammunition and pyrotechnics is not permitted while training in the BLS.

f. Artillery simulators/smoke grenades are prohibited within the BLS.

g. Use of any type of "tear" or "riot control" is prohibited.

h. Safety pyrotechnics include G950 red smoke, L306 red star, L307 white star signal marine distress. These items will not be used unless required due to an emergency. (Pu'uloa RTF Range Control staff will advise).

i. Digging and other disturbances of ground surface and/or subsurface are prohibited. Cutting of any trees or tree limbs is prohibited.

j. Use of detergents or chemicals is not allowed. Cleaning or maintenance of motor vehicles or machinery is prohibited.

k. Any accidental fuel spills or other HAZMAT related incidents, must be immediately reported to Pu'uloa RTF, at (808) 474-8058/8061. Pu'uloa RTF staff will initiate HAZMAT response procedures and coordinate with the MCBH, S-3 and the Environmental Department. Containment, clean up, and reporting of HAZMAT-related incidents will be performed in accordance with EPA, DOD, and USMC procedures and directives.

l. Should a monk seal or sea turtle be discovered "beached" within the BLS, all activity in the immediate vicinity must cease. The present unit will immediately contact Pu'uloa RTF staff at (808) 474-8058/8061.

m. Disturbing, touching or harassing an endangered species is a violation of Federal Law.

n. Requests to utilize BLS Pu'uloa RTF must be submitted through RFMSS. MCBH, S-3 Directorate will have final approval for use of BLS Pu'uloa.



Figure 5-8. BLS PU'U LOA

11. Landing Craft Air-Cushioned Operations

a. LCACs are restricted in their ability to maneuver when departing from, and returning to, the LCAC LZs. Due to the LCAC's high speed of advance, a clear LCAC transit lane extends out seaward leading toward the LCAC LZs.

b. It is imperative that no vehicles, watercraft (other than WFO support), or pedestrians, move to within 350 meters of moving LCACs, other than those personnel participating in the training exercise.

c. The following LCAC LZs are available for use:

- (1) CLZ Hale Koa Beach.
- (2) CLZ MCTAB.

12. Waterfront Operations

a. WFO's mission is to provide MCBH with waterborne search and rescue assets. WFO's Command and Control Center is manned 24 hours per day, seven days per week and is on-call for secondary support to United States Coast Guard (USCG) Honolulu Sector's search and rescue efforts. WFO can be reached on Very High Frequency (VHF) channels 16 and 82A to assist local mariners

requesting assistance or experiencing problems in the Kaneohe Bay area. They serve as the Installation's Emergency Response Team in the event of an oil/hazardous fluid spill or other environmental hazard in Kaneohe Bay and provide assistance to the military police division by enforcing security regulations in prohibited and restricted waters.

b. Provide an oil spill response team capable of containing, deflecting, and initial cleanup recovery for any military oil spill in the Kaneohe Bay area within fifteen minutes.

(1) Assist the MPD with the waterfront security and enforcement of recreational activity regulations in the MCBH Kaneohe Bay, intercepting all waterway traffic within 500 yard prohibited areas.

(2) Assist in the enforcement of water safety requirements for the controlled firing area and conduct regular liaison with the RCO to determine scheduling and limits of SDZs in accordance with CFR 334.1380.

(3) Provide assistance for USCG's Civil SAR efforts as the waterborne platform on the windward side of Oahu as delineated in the Memorandum of Agreement. In addition, when requested from USCG Sector Honolulu, monitor VHF radio channel 16 for the windward side of Oahu.

(4) As directed, respond with the ready rescue boat within two minutes of an alarm, for Waterborne SAR for any military aircraft.

(5) Provide assistance for USCG Marine Safety Office civil oil spill response to protect areas identified in the Oil Pollution Act of 1990 Facility Response Plan.

(6) Provide assistance to lifeguards at MCBH Kaneohe Bay, Bellows Air Force Station, Kailua Beach Park, Mokapu Beach Park, Waimanalo Bay Beach Park and others, as directed.

13. MCBH Pier

a. Requests. All requests for use of the pier shall be routed via the MCBH, S-3 RTAM RFMSS Scheduler as described in Chapter 3, paragraph 3002 of this Order.

b. Dimensions. The pier is 485 ft. long, 40 ft. six in. wide with an average draft of 28 ft.

c. Requirements. All vehicles will be boomed off by WFO prior to any fueling or de-fueling evolutions.

d. Capabilities

(1) Fuel types

(a) Hook-up types: Six in. riser on six in. carbon steel pipe.

(b) Output time: 2,500 barrels per hour (one barrel=42 gallons).

(2) Water Hook-ups

(a) Water hook-up types: Garden hose and one & one-half in. fire hose.

(b) Required attachments: Back flow regulator.

(c) Output time: 80 pounds per square inch.

14. Pier Staging Area

a. MCBH Pier staging area is a special use loading, unloading, and cargo staging area located between the MCBH Marina and the MCAS. Dates that vessels will be moored pier side and vehicles/cargo staged must be scheduled via the RFMSS by the training unit. The area is normally scheduled by the training unit's embarkation office or S-4 although any unit with RFMSS access can schedule. The support vessel is not responsible for scheduling the pier.

b. Twenty-four hours prior to commencement of operations, an OIC/RSO from the training unit will report to Range Control to sign for the TA. At this time the individual responsible for the TA will receive a map depicting the loading/unloading zone, information regarding the loading/unloading zone and a clearance checklist. These items will be returned to Range Control at the conclusion of operations.

c. OICs will have a copy of the RFMSS approval and a signed copy of the RM worksheet on-hand while loading/off-loading operations are being conducted.

d. OICs will ensure that the staging operations will not interfere with Marina traffic or encroach into Marina parking areas as indicated in Figures 5-8 and 5-9.

e. Vessels entering Kaneohe Bay will contact WFO on VHF 82A when passing either channel head buoy, and notify WFO that they are inbound/outbound.

f. Vessels having a mast higher than 72 ft. will notify Range Control.

g. Safety procedures applicable to loading/offloading and speed limits will be strictly enforced.

h. The staging area will be cordoned off with engineer tape and road cones 24 hours prior to vehicles or cargo can be staged.

i. If POVs are in the way of loading/offloading operations contact Range Control at (808) 257-3180.

15. Water Way Bulletin/Local Notice To Mariners

a. A Local Notice to Mariners (LNM) will be released every Monday by the MCBH, RTAM office.



Figure 5-9. MCBH Pier Staging Area

b. It covers a seven-day timeframe from Wednesday to Tuesday. It is the range schedule that the USCG refers to when publishing the LNMs. LNMs can be obtained by downloading them from the USCG District 14 Web site at <http://www.navcen.uscg.gov/?pageName=lnmDistrict®ion=14>.

c. The following is a sample of the MCBH "Water Way Bulletin". This bulletin is provided to the USCG every Monday.

Restricted Hours				
Moku Manu			Ewa Beach	
Week of 29 Jun-5 Jul 2011			Week of 29 Jun-5 Jul 2011	
Day	Zone I Time*	Zone II Time**	Day	Time
Wednesday	N/A	0830-1800	Wednesday	0800-1700
Thursday	N/A	N/A	Thursday	0800-1700
Friday	N/A	0700-2300	Friday	N/A
Saturday	N/A	N/A	Saturday	N/A
Sunday	N/A	N/A	Sunday	N/A
Monday	N/A	N/A	Monday	N/A
Tuesday	N/A	N/A	Tuesday	N/A

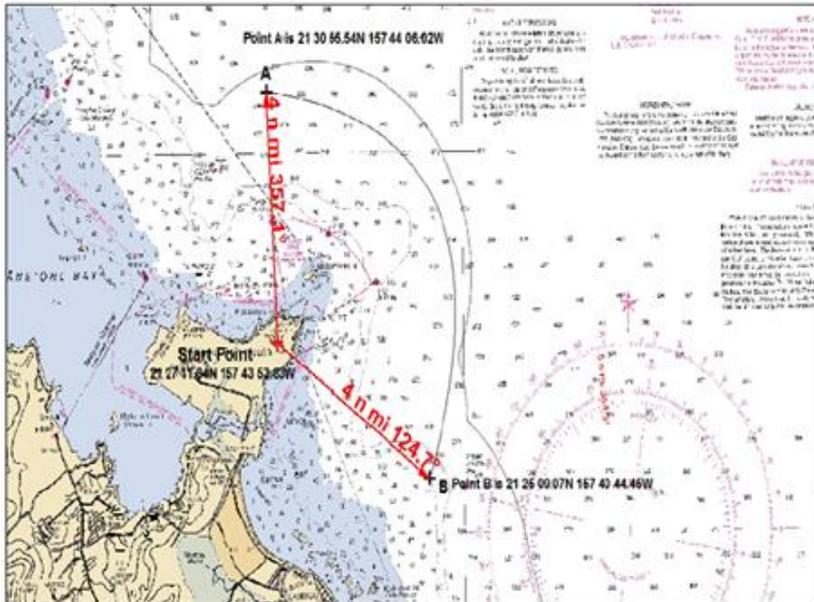


Figure 5-9a. Zone I

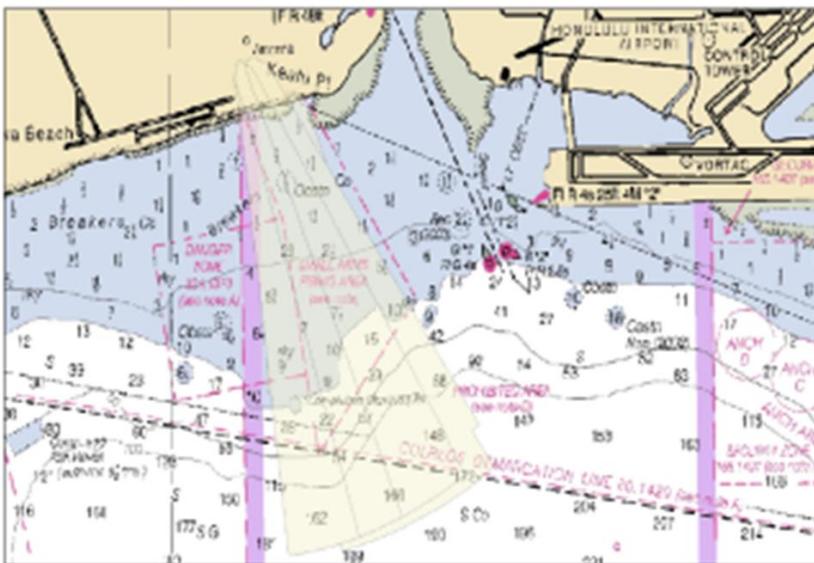


Figure 5-9b. Zone II

- * Zone I will encompass R-1, 5, 7, 8, 9, and 10.
- ** Zone II will encompass R-6, and 8A (if firing to the east)

Chapter 6

Training Areas and Range Operations

1. Operations

a. Establishment. TAs have been established by the CO, MCBH. This does not prohibit the identification of additional TAs as long as all safety precautions and environmental regulations are adhered to. Recommendations to improve training and range facilities should be submitted to the MCBH, S-3 RTAM.

b. Maintenance. The RTAM range maintenance contractors, along with the MCBH, S-4 facilities maintenance division accomplish the maintenance of the TAs and facilities. Units are encouraged to report damage or maintenance problems to the Range Management Office so corrective action can be taken. All units or organizations that use MCBH RTAs or facilities are required to conduct a police call of the RTA or facility at the completion of the event. Units that fail to do so will lose their RTA or facility use privileges.

c. Range Control Inspectors. Range Control Inspectors are authorized to access all training facilities for the purpose of inspection, operation, or maintenance at any time. Unit training will not be disrupted by these personnel except when necessary to perform their duties. Units conducting training will not interfere with these personnel in the performance of their duties, even if the range or facility is in use.

2. Road Closure Procedures

a. All requests for closure of roads will be submitted to the MCBH, S-3 NLT five business days prior to the scheduled event via a Letter of Instruction depicting their event/ceremony (i.e., retirement ceremony, change of command, etc.).

b. The requesting unit is responsible for the posting of road guards and barricades, if needed. This will be coordinated with the MPD.

3. Control Features. Signs and markers are provided on all TAs. Signs and markers are described below:

a. Surveyed Monuments. A white concrete monument placed near the center of GPs, declination stations and/or survey points.

b. Hearing Loss Signs. A sign warning users that hearing protective devices are required.

c. Off-Limits Signs. A sign warning that the area is off-limits by order of the CO unless scheduled through the S-3, RTA Scheduler, MCBH.

d. Additional Signs. Self-explanatory in nature, signs announcing specific instructions or precautionary measures are posted at certain TAs, as deemed necessary by the MCBH, S-3.

e. Barricades and Guards. Either barricades or guards shall cover normal approaches to danger areas created by unit training events. Barricades

combined with appropriate warning signs are adequate and guards are not required, except in special cases as noted in this Order. Barricades, when required, will be provided by the Range Control, (MCBH, S-4), or MPD for all roads and trails leading into the restricted area. There are four types of barricades:

(1) Portable barricades consisting of a sawhorse-like structure at least 2 ft. high, placed directly across the road.

(2) Permanent barricades, consisting of heavy posts, embedded on both sides of the road or trail with a chain, or cables stretched between the posts. The lowest point is at least 2 ft. above the ground, with the signs attached to the center of the chain. Such chains or cables shall be locked in place.

(3) Portable water-filled barricades placed across the road or trail to restrict access.

(4) Cones with fluorescent tape strips placed across the road or trail to restrict access.

4. Check-Out/Check-In Procedures

a. Once the requesting unit has received approval for their request, it is the responsibility of the unit to ensure they are in compliance with their authorized times, dates, and requested activity (i.e., weapons systems, ammunition, scenario). Should there be a requirement to modify or cancel their reservation, the unit shall notify the MCBH Range Scheduler at the earliest opportunity. Failure to cancel RTAs or facilities IAW this Order will result in RTAM sending the CO of that unit a "no show" report. Failure to take corrective action may adversely affect that unit's scheduling privileges.

b. OICs and RSOs using Kaneohe Bay RTC or Pu'uloa RTF go directly to the range facility. For MCTAB, BTA, LZ 216, LZ Eagle, PRBT, FT Hase BLS, Hale Koa BLS and the Pacific War Memorial BLS the OIC and RSO must pick up the TA keys and sign for the information package at Kaneohe Bay Range Control, prior to occupying the site. Either the OIC/RSO shall return the keys/equipment upon completion of training.

5. Bivouacking

a. Bivouacking is not allowed on observation posts, towers, impact areas, or inside the MOUT facilities.

b. Bivouacking is allowed onsite when planned in conjunction with unit training aboard the same TA. Units desiring to bivouac are subject to the following conditions:

(1) Units may arrive the night before training. The RSO must check out the TA prior to occupation by the bivouacking unit.

(2) Bivouacking shall comply with the provisions of Chapter 2 of this Order.

(3) Units must provide a 24-hour guard at the bivouac site if ammunition or personnel are present.

(4) The bivouacking unit shall maintain communications with Range Control via the Range Safety Net. In the event of an emergency contact Range Control via the Range Safety Net or at (808) 257-3180.

(5) The unit RSO(s) are required to be present any time a unit is occupying a range or training area, to include a bivouac status.

6. Medical Support Requirements

a. Unit commanders are authorized to determine if medical support is required for their non-live fire training events based on the risk assessment hazard for that event. Medical support will be required for all Live Fire, High Explosives, and High Risk training.

b. A vehicle designated as a safety vehicle must be present in the TA with the exception of tilt rotor/helicopters conducting confined area landings without passengers. At a minimum, the presence of at least one safety vehicle is required. Medical support personnel if required can be centrally positioned to support more than one range or training event.

c. Medical support personnel and safety vehicle during use of High Mobility Multipurpose Wheeled Vehicle (HMMWV), Egress Assistance Trainer (HEAT); and Mine Resistant Ambush Protected (MRAP), Egress Trainer (MET); and Joint Light Tactical Vehicle (JLTV), Egress Trainer (JET) training events are not mandatory requirements. The decision is left to unit commander based upon their RM worksheet.

7. Conduct of Training

a. Assignment to a TA does not include LZ, airspace, or other training facilities located within the TA unless specifically requested and approved.

b. Training must be conducted and supervised to avoid damage to facilities and utilities located within the TAs.

c. Training must be conducted without unnecessary damage to, or destruction of, natural resources, and must be in compliance with the provisions of Chapter 2 of this Order.

d. Temporary roadblocks, fortifications, etc., constructed during training exercises, will be removed immediately upon completion of the exercise.

e. Roadblocks will be manned at all times and non-exercise traffic will not be permitted to pass until it is safe to allow traffic to continue.

f. Units utilizing LZ Eagle or GPs must stay clear of housing and civilian work-sites at all times.

g. Digging is not permitted anywhere except at MCTAB in the designated fighting position dig site 1 through 5, in the BOTAs, Engineer Training Area 2 and MCBH BTA Engineer Training Area 1. Anyone who uncovers human remains or

culturally sensitive items must cease the activity that uncovered the items, mark the area, and notify Range Control immediately.

h. Trash will not be burned or buried at any training site. Policing of the TA is the responsibility of the training unit.

i. If approved by RTAM, co-use of all RTAs and facilities is highly encouraged. TAs are not generally scheduled for exclusive use unless co-use has been specifically denied by the MCBH S-3.

j. All communication wire laid by using units in any TA must be retrieved prior to departing the training site.

k. Cat holes or slit trenches are not authorized anywhere on MCBH RTAs.

l. There are portable toilets at the ranges and in the TAs to handle human waste. The MCBH portable toilets are scheduled for maintenance twice a week. Units are encouraged to conduct a recon of the TA prior to the event. If the training event is going to exceed capacity of the MCBH portable toilets, units must contract for additional portable toilet support. Units are responsible for funding the additional portable toilet support and must coordinate the portable toilet contractor's access (delivery) with Range Control. Training units are not authorized to re-locate any MCBH contracted toilets.

8. Ranges. The Kaneohe Bay RTC is located in the Ulupa'u Crater. It is a multipurpose range capable of supporting a variety of live-fire training exercises. Firing is authorized at KBRTC from 0600-2300 IAW CFR 334.1380. The Pu'uoloa RTF is located near Ewa Beach. It is a known distance rifle and pistol range complex. Normal firing times for PRTF is 0700-1700. Extensions are possible if delays are encountered. S-3 RTAM can approve extensions if deemed necessary by the Puuloa OIC to complete training for the day. S-3 RTAM will not authorize extensions past ending evening nautical twilight (EENT). Exceptions to the firing times are possible especially for designated sniper units conducting sniper initial qualifications, requalification or sustainment training. It is preferred that the weapons be suppressed but that is not mandatory. Approved limited visibility firing must be completed by 2130. Requests to conduct limited visibility training must be received by S-3 Dir/Dep of Operations 10 working days prior to execution of the event. S-3 Dir/Dep may approve limited visibility live fire. S-3 RTAM will coordinate with MCBH S-5 CPLO and PLO for community notification. More information regarding specific range regulations are covered in Appendix R.

9. Beaches. The beaches aboard MCBH provide an excellent opportunity for forces to conduct waterborne movements and amphibious training. LCACs have been authorized to conduct operations at MCTAB and West Field (Hale Koa beach). LCUs are authorized to land at MCTAB and the pier at MCBH. Chapter 5 of this order contains more detailed information.

10. Base Swimming Pool

a. The Base Pool is the primary training tank for aquatic training and certification. Refer to Chapter 3 of this Order for scheduling.

b. All military units can request and reserve the pool via RFMSS. Units will check-out the pool from Range Control. Training units must provide trained and certified water safety personnel, medical support, and safety vehicle unless MCCA aquatics is providing life guards.

c. The pool is available to the using unit from 0500-1100 Tuesday-Friday. The pool is closed Mondays.

d. MCCA has priority for the pool starting at 1100 Tuesday-Friday and weekends and holidays.

11. Training Areas

a. BTA consists of an Obstacle Course, Leadership Reaction Course (LRC), LZ, Engineer Training Area 1, Gas Chamber, GP Boondocker, an Operator Driving Simulator (ODS), Supporting Arms Virtual Trainer (SAVT), HEAT, MET, JET, Combat Convoy Simulator (CCS), Urban Operations Facilities, and Marine Corps Martial Arts Program (MCMAP) pit. The LZ can be used for troop inserts, extracts, SPIE, rappelling, and fast-rope training. It is the responsibility of each training unit commander to ensure that training is conducted IAW MCOs, controlling agency directives, and MCBH standards and procedures. See reference (p) for proper conduct of air operations.

(1) For information regarding the ODS, SAVT, HEAT, MET, JET, and CCS, refer to Appendix Q.

(2) For information regarding the Urban Operations Facilities, refer to Appendix P.

(3) For information regarding the MCMAP pit, refer to paragraph 17 of this chapter; for the Obstacle Course, Leadership Reaction Course, refer to Appendix R.

(4) For information regarding the Gas Chamber, refer to Appendix R.

(5) For information regarding the Engineer Training Area 1, refer to Appendix R.

b. Pyramid Rock Training Area (PRTA) consists of Urban Operations Facilities with rappel/fast rope/rock climbing capability, and a BLS. Pyramid Rock Beach is an adequate area for platoon-sized maneuvers. Use of blank ammunition, pyrotechnics, small amounts of explosives and blast simulation devices are authorized. A pyrotechnics request is required. The use of CS gas is prohibited. Waivers to this policy may be granted on a case-by-case basis by the S-3. Ground disturbance will not be permitted within or around the Pyramid Rock Beach TA. Figure 6-1 depicts Pyramid Rock Training Area.

(1) For information regarding the PRTA Urban Operations Facilities, refer to Appendix P.

(2) Amphibious vehicles may land in PRTA and conduct inland movement via prescribed routes. For information regarding the Beach Landing Site (BLS), refer to Chapter 5 of this Order.



Figure 6-1. Pyramid Rock Training Area

c. Marine Corps Training Area Bellows (MCTAB) consists of approximately 1,074 acres designated for amphibious, air and ground maneuver training, Land Navigation training, Military Operations in Urban Terrain (MOU) Training, and SAR training. The OIC/RSO must sign for the TA(s) from MCBH Range Control (Bldg 1584), prior to occupation of the TA(s).

(1) Restrictions and Limitations

(a) TA 1 is a co-use, non-live-fire/non-blank fire TA with authorized training times of 0800 Monday to 0800 Friday. The TA must be cleared by 1200 Friday. The TA is a public use beach starting at 1200 on Friday and through the weekend, and on all state and federal holidays. The TA will be cleared by 1200, the day prior to any holiday. Beach usage for weekend training will be considered on a case-by-case basis and must be

approved by the MCBH, S-3. Requests to use TA 1 over a weekend must be submitted 45 days prior to the event.

(b) Helocasting into DZ Jacobs is authorized from 0800 Monday through 0800 Friday. Training Area must be completely clear by 1200 on Friday.

(c) Helicopter/tilt-rotor training is authorized within TAs 2 and 3 during the listed hours, Monday through Sunday. Training includes assault landings, low-level flight training, SPIE, rappel, and HRST training. Helicopters will only land/takeoff from designated LZs and will strictly adhere to the flight pattern authorized and keep out of no fly zones.

(d) Due to the close proximity of the homes and property in Waimanalo, as well as the TA's susceptibility to brush fires, smoke grenades, simulators, flash or blast devices may only be authorized after all fire risk factors have been considered. Units that desire to use these munitions will submit in writing to the MCBH, S-3, a RM worksheet outlining all preventive measures. A pyrotechnics request is located in Appendix O of this Order. Overhead type pyrotechnics are not authorized without specific approval from the MCBH, S-3.

(e) TAs 2 and 3 are generally used as a non-live-fire TA. There are provisions for getting a live fire waiver or deviation approved. Blanks up to .50 cal. are allowed from 0700-2200, Monday-Friday. Weekend and holiday hours are 0900-2200. No digging is allowed in TAs 2 or 3, except in the BOTA, Engineer Training Area 2 and the defensive fighting position training sites. Parachute operations will be coordinated 30 days prior to the start date. There is a 300 ft. buffer zone around the entire boundary of MCTAB in which blanks cannot be fired and aircraft cannot fly over.

(f) Building 700/FOB is a non-live-fire TA. Prior to occupying the structure, the OIC will conduct a walk through to visually inspect the building and report damage. Unreported damage will be the responsibility of the training unit.

(g) The stream dividing TA 2 from TA 3 is off-limits. Units or individuals may not conduct any kind of training in the stream itself. Units must drive with caution when using the access road adjacent to the stream.

(h) The cemetery, approximately 300 ft. west of Building 700, is off-limits to all units and individuals. Units are not allowed to conduct any kind of training within the confines of the cemetery.

(2) Departing. Before departing, a Range Control representative must visually inspect the TAs to ensure they are policed. Each unit must conduct a trash/brass call upon completion of training. Failure to do so will result in the unit returning and policing all blank casings or trash left in the TA. Once the unit is cleared, they can proceed to exit MCTAB and return the keys and TA packet they received from Range Control.

d. Urban Operations Facilities. For information regarding the MCTAB Urban Operations Facilities, refer to Appendix P.

e. Engineer Training Area 2. ETA-2 is located in TA 3, west of MOUT 3. ETA-2 is encompassed by three berms and a hillside and is approved for heavy equipment operations, but can also be utilized for other training. The boundaries of ETA-2 are detailed in Fig 6-12. For information regarding the MCTAB ETA-2, refer to Appendix R.



Figure 6-2. ETA-2 Boundaries

f. Barrier Obstacle Training Area (BOTA). The BOTA is located in TA 2, southwest of the FOB. The BOTA is encompassed by three abandoned flight lines and was approved for heavy equipment operations, but can also be utilized for other training. The boundaries of the BOTA are detailed in Figure 6-13. For information regarding the MCTAB BOTA, refer to Appendix R.



Figure 6-3. BOTA Boundary

g. Combat Vehicle Operator Course (CVOC). Is located within TA 3 and for vehicle operator's confidence training after the basic motor vehicle operator school license has been granted. The CVOC is depicted in Figure 6-14. For information regarding the MCTAB CVOC, refer to Appendix R.



Figure 6-4. CVOC

h. Land Navigation Course. The land navigation course is comprised of three sections (Land Nav A, B, and C) which make up the overall course (Land Nav D). Each of the three sections may be used individually. For the land navigation grading key, contact Range Control. For scheduling, refer to Chapter 3 of this Order. For information regarding the MCTAB Land Navigation Course, refer to Appendix R.

12. Gun Positions

a. GP Boondocker

(1) GP Boondocker is comprised of four GPs and is located in the open field 250 ft. by 300 ft. located inside the BTA (see Figure 6-6). The area surrounding the GP houses endangered water birds in the adjacent Nu'upia Ponds WMA and should be briefed to all individuals training in the area. GP Boondocker may also be used as an LZ or a Command and Control TA.

(2) The route of march into the position will be from any roads leading into the TA.

(3) Ensure the use of road guards when convoying across Mokapu Road or Harris Street. The field is relatively flat. Therefore, it does not drain well after heavy rains. Units destroying the grounds are responsible for repairing the grounds.

(4) Refer to Chapter 3 of this Order for scheduling requests.



Figure 6-5. Location of LZ/GP Boondocker

b. GP 216

(1) GP 216 is the primary VIP LZ for MCBH and is located in the open field southwest of Building 216 (see Figure 6-6). LZ/GP 216 may also be used as an LZ or a Command and Control TA. LZ/GP 216 is located southwest of Building 216, just inside the Eastern side of the LZ concrete square, closest to Building 215 (see figure 6-7). A diagram of LZ/GP 216 can be found in Figure 6-8. The point is a brass 105 millimeter (mm) cartridge (see Figure 6-9) stamped with "GP 216" "1/12 Survey". The EOL is located by the Western corner of Building 277. It is also a brass 105mm cartridge; stamped with "EOL" "Johnny-5".

(2) The route of march into the position will be west along Mokapu Road (towards the flight line). Turning left onto "C" Street, traveling one block and turning left onto 3rd Street. At the intersection of 3rd Street and "D" Street proceed directly forward into the GP.

(3) The following data is provided.

(a) AZ to the EOL is 0829.33.

(b) Distance to the EOL is 71 m.

(c) GP 216.

1. E: 628443.957.

2. N: 2371738.772.

3. Alt: +3.217 m.

(d) EOL Johnny-5:

1. E: 628495.547
2. N: 2371787.474
3. Alt: +3.266 m.

(4) Road guards are required when convoying across "D" Street. The field is relatively flat. Therefore, it does not drain well after heavy rains. Units destroying the grounds are responsible for repairing the grounds.

(5) Refer to Chapter 3 of this Order for scheduling requests.

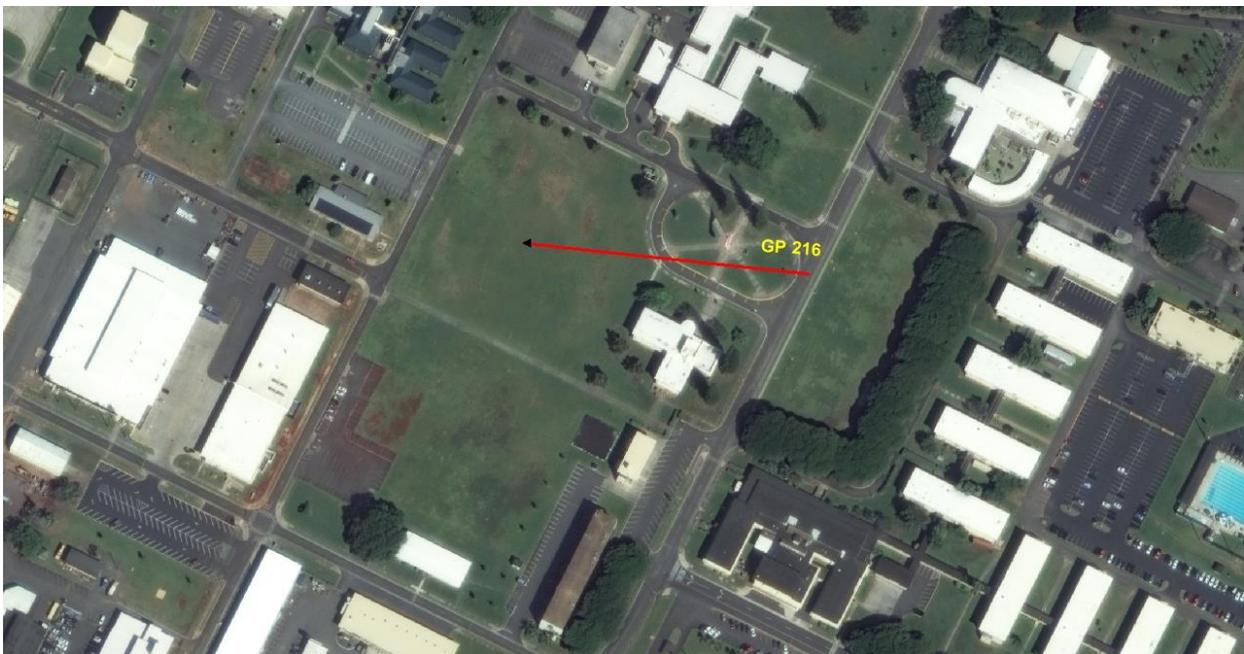


Figure 6-6. Location of LZ/GP 216

c. GP Eagle

(1) The location and layout of GP Eagle are shown in Figures 6-10 and 6-11. It is a large open field which can be used as a limited-use LZ, approximately 150 meters by 100 meters in size located across the hard surface road from Fort Hase Beach. It is in close proximity to base housing areas and heavily used roads. As well, it has a large impact on range operations and activities at Fort Hase Beach. Careful and advanced coordination with MCBH is needed for use of GP Eagle. GP Eagle may also be used as an LZ or a Command and Control TA.

(2) The point is a brass 105mm cartridge stamped with "GP Eagle" "1/12 Survey" and is shown in Figure 6-7. The EOL is located near the mail box (see Figures 6-8 and 6-9). It is also a brass 105mm cartridge, stamped with "EOL" "Party Mac".



Figure 6-7. Building 215

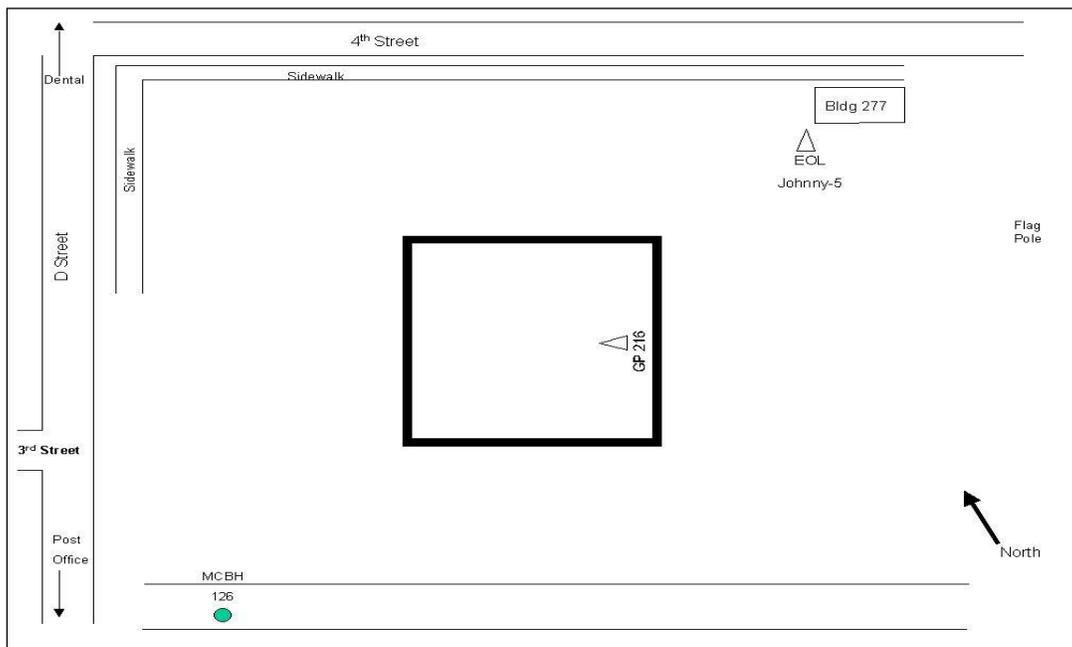


Figure 6-8. LZ/GP 216 Diagram



Figure 6-9. Stamped 105mm Cartridge at GP 216

(3) The route of march into the position will be from Middaugh Street. Once past the creek, the driver may turn left and proceed directly forward into the GP.

(4) The following data is provided:

- (a) AZ to the EOL is 0252.5.
- (b) Distance to the EOL is 81 m.
- (c) GP Eagle.

- 1. E: 631023.0.
- 2. N: 2372095.0.
- 3. Alt: +21.0 m.

(d) EOL Party Mac

- 1. E: 631043.0.
- 2. N: 2372174.0.
- 3. Alt: +23.0 m.

(5) Ensure the use of road guards when convoying across Middaugh Street. The field is relatively flat. Therefore, it does not drain well

after heavy rains. Units destroying the grounds are responsible for repairing the grounds.

(6) Refer to Chapter 3 of this Order for scheduling requests.



Figure 6-10. Location of GP Eagle

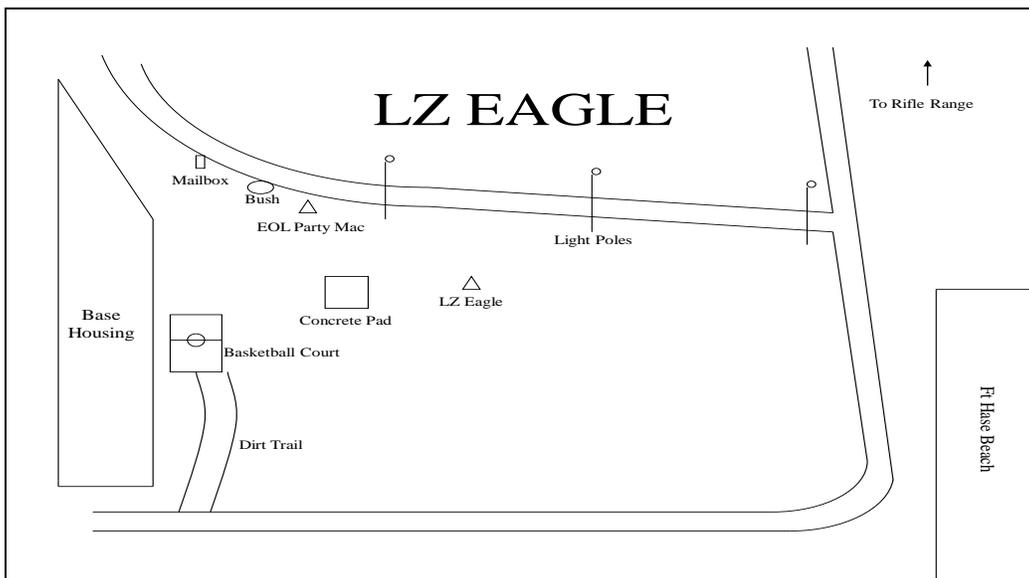


Figure 6-11. Layout of LZ Eagle



Figure 6-12. Images of LZ Eagle 105mm Cartridge



Figure 6-13. EOL Party MAC 105mm Cartridge



Figure 6-14. EOL Party MAC 105mm Cartridge

d. Observation Post (OP) Kansas Tower. The location of OP Kansas Tower is depicted in Figure 6-15. Use of this OP must be scheduled in advanced with Range Scheduling per Chapter 3 and using units will adhere to the following restrictions:

(1) A minimum of 25 meters standoff distance shall be maintained from all facilities, structures, shelters, and utility equipment. Units utilizing the OP are not authorized access to the KT Hill Conference Room.

(2) Only one safety vehicle, is authorized to be on site. POVs are not authorized as a safety vehicle or on the training site.

(3) Proper police call of the OP is required before departing the training area.

13. Ceremonial Training Areas. The MCBH, S-3 schedules ceremonial areas for use by units conducting official ceremonies.

a. Dewey Square

(1) Ceremonies conducted at Dewey Square require a RFMSS request. The RTAM scheduler will coordinate quiet hours with MCAS and IE&L. Additionally, units must coordinate with MPD at least one day prior to the ceremony if they intend to block off any roads, or place road guards and safety cones in order to control noise during the ceremony.

(2) Blocking of roads around Dewey Square to must be limited in order to minimize the impact on the operations of other base personnel and units. Road guards are recommended for all ceremonies and are the responsibility of the requesting unit. Roads shall not be blocked off more than 30 minutes

before the ceremony, and must be unblocked immediately upon completion of the ceremony. Only the following locations may be blocked off (see figure 6-17):

- (a) The intersection of E Street and 3rd Street.
- (b) The intersection of E Street and Mokapu Road.
- (c) 5th Street at the exit of the Base Theater parking lot between the theater and the Education Center.
- (d) 4th Street at the north east corner of the Base Flag Pole island. Access to the parking area around the Base Flag Pole may not be blocked off.

(3) If ceremonies are conducted outside of Dewey Square, units must still coordinate (phone call or e-mail) with MCBH S-3 and MPD with the details of the event.



Figure 6-15. OP Kansas Tower

b. Pacific War Memorial. The PWM is located at the entrance of MCBH, and may be scheduled for re-enlistment, retirement, or award ceremonies. Training units shall adhere to the prescribed procedures when scheduling and using this area.

(1) The requesting unit is responsible for coordinating their own transportation and with contacting the MPD for assistance with traffic control. Parking at the site is limited. No vehicles will be parked along "G" street exiting the main gate, unless preapproved and coordinated with MPD and MCBH, S-3. There is no room for buses.

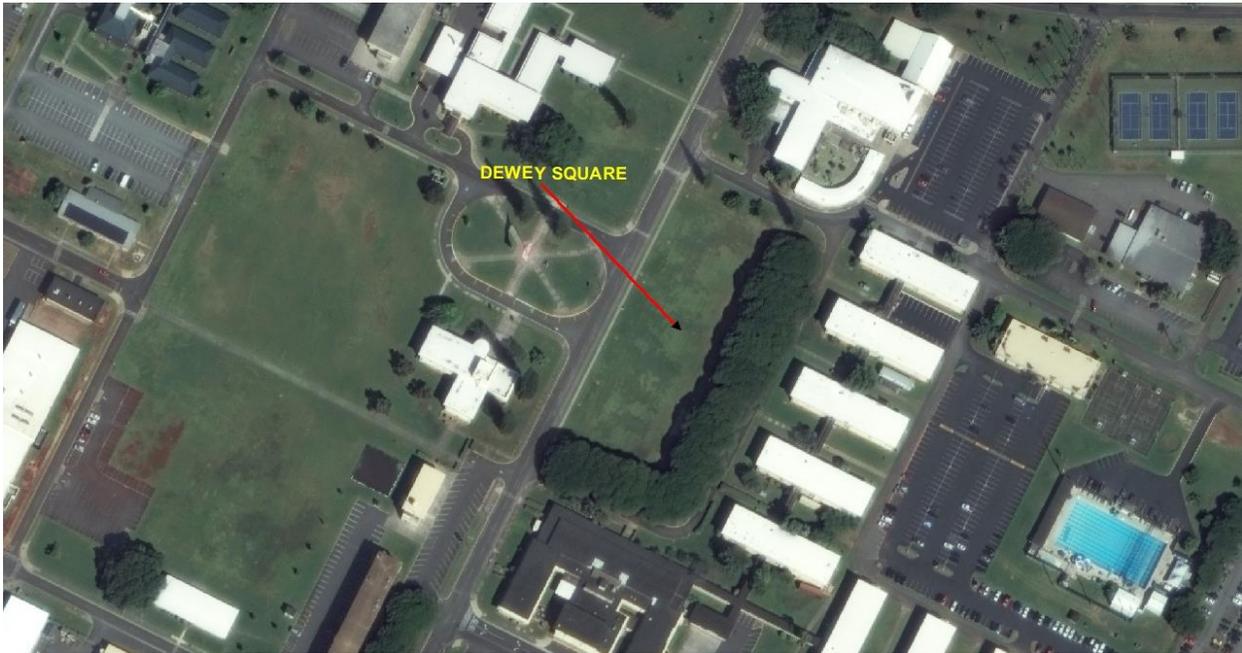


Figure 6-16. Dewey Square Training Area

(2) When in formation around the circle of honor (red inscribed bricks), special care must be taken not to damage any of the bricks (as they are personalized). Handling of the guide on or weapons on the deck may damage the bricks and is not authorized for use on the PWM brick deck.

(3) The training unit commander will immediately report any damage to the PWM or property to the MCBH, S-3.

(4) A RFMSS request must be submitted and approval must be obtained before the unit can occupy the site.

c. Ceremonial Equipment. The Director of MCCA has ceremonial equipment that may be utilized for unit ceremonies for a fee. For a detailed listing and descriptions of additional MCCA items and services, contact MCCA at 254-7502.

d. Marking of Parade Field. Marking of the parade field is only authorized on the grassy portions of Dewey Square and the PWM. Water-based paint is the only authorized paint allowable. Absolutely no paint markings shall be made on any sidewalk, road, or facility to signify turning points or cues for marching units. Units can utilize standard chalk to mark roads or sidewalks if necessary.

14. Hiking and Physical Fitness Training. MCBH is an excellent base to conduct unit or individual runs or hikes. IOT minimize congestion and to conduct a safe environment, units are to avoid hiking and running during rush hour traffic periods both morning and evening. Morning rush hour traffic starts at 0630 and ends at 0815. Evening rush hour traffic starts at 1630 and ends at 1800.

a. Running/Hiking

(1) Jogging is defined as recreational physical conditioning runs involving individuals or small groups of personnel. No formations, individuals in charge, chanting or cadence counting are involved.

(2) Unit conditioning runs/hikes are defined as organized physical conditioning events involving units of squad size or larger in formation and under control of the unit leader. Physical fitness tests are included in this category. Units are reminded of the requirement for medical support, a safety vehicle, and road guards. Unit runs must not impede traffic by employing the practice of safety vehicles "following in trace". Instead, safety vehicles should move from location to location to be in the best support position. Units must not allow their formation to impede traffic for the duration of their run. Traffic will be allowed to pass through or to the side of any unit formation. Any run/hike route requests for company sized units or larger must be submitted in RFMSS to MCBH, S-3, 48 hours prior to the event. All approved conditioning runs and hikes are subject to cancellation at any time, should an emergency arise or an operational exercise commitment require the use of the area.

(3) Individual physical training may be conducted along the designated Nu'upia Ponds Running Trail in this area between the hours of 0600-2100. Unit runs, at any level, must be approved with prior coordination with the MCBH, S-3 RTAM Scheduler. Absolutely no cadence counting is allowed in this area.

(4) Any requests for access to MCBH Flight Line will be submitted to MCAS operations. Units requesting to utilize the flight line must clear and police the area prior to 0600. No running or unit physical training is authorized along the flight line IAW reference (c) and Chapter 4.

(5) If hiking to or from MCTAB, requesting units must coordinate with the Honolulu Police Department (HPD) at (808) 235-7621. Submit request to MCBH S-3 and provide a map showing the hike route, date, time, number of personnel, number/type(s) of vehicle(s) and any medical support. Submit letter to:

District Commander, Kaneohe Police Dept
45-270 Waikalua Road
Kaneohe, HI 96744

District Commander: (808) 235-7621
Administration Fax: (808) 234-0487
Receiving Desk Fax: (808) 234-3873

(6) Units conducting conditioning hikes to MCTAB will adhere to the following regulations:

(a) Chanting/cadence counting and clapping is prohibited along the route.

(b) Designated rest areas will be away from residential areas. All trash must be thoroughly policed.

(c) Hikes will be conducted so as to have minimum interference with traffic. When and where available, bike routes and grass areas along the side of the road will be utilized. If units must travel in the roadway, remain as close to the right side of the road as possible and move in the direction of traffic.

(d) Units shall not impede traffic along the route. Units shall form along the side of the road, wait for the traffic light to give them access to walk, and then hike across the road with their designated road guards in place at that time only.

(7) All off-base conditioning hikes will be considered on a case-by-case basis. They require the submission of a request to MCBH, S-3 and a map of the proposed route, with outside agency approval documentation. For approval of an off-base conditioning hike, requesting units must coordinate with MPD, HPD, and PAO. If a hiking route involves the use of any state beaches or recreational areas, the requesting unit must coordinate and receive approval from the City and County of Honolulu Department of Parks and Recreation, at phone number (808)523-4525/27. If a hiking route involves the use of public trails, coordination must be made with the Oahu Division of Forestry and Wildlife to obtain a permit. To obtain a Trail and Access Activities Permit, a map of the route must be submitted to the Division of Forestry and Wildlife at least 15 days in advance of the start date. The Division of Forestry and Wildlife can be contacted at (808) 973-9782.

(8) Unit commanders are ultimately responsible for the safe conduct of unit conditioning runs and hikes. For detailed safety guidelines aboard MCBH, refer to applicable Base Orders.

(9) Units shall not conduct training within areas classified as off-limits to training. Organizations requiring access to non-training areas for training evolutions may submit a request 10 business days prior to the event to MCBH, S-3 Directorate.

(10) There is a dirt trail alongside the runway near the north departure end that is used for base sporting events on occasion. This requires MCAS CO approval for usage. This area is restricted at all other times to ensure the safety of personnel and normal airfield operations. There are posted signs that declare this area a restricted area. All pedestrian traffic is prohibited along aircraft runways and taxiways due to an airfield requirement to keep a 750 ft. buffer from the runway centerline.

(11) The use of Klipper Road to the beach and the sand dunes area shall be approved on a case-by-case basis and must be coordinated with MCCA.

(12) Units are authorized to conduct unit hikes/runs in family housing with the following restrictions:

(a) Unit commanders shall coordinate with MCBH, S-3 Scheduler five business days prior to conducting their hike/run and provide their route.

(b) Unit commanders shall conduct RM and take into consideration school children and buses when selecting their route.

(c) Unit safety vehicles shall abide by the base traffic regulations when traveling through housing. Drivers shall halt and wait with other traffic in the event a school bus has its red lights flashing.

(13) Units participating in conditioning runs/hikes shall adhere to the following requirements regarding traffic (refer to Base Order 5560 with Change 6, for detailed requirements):

(a) Platoon size units or larger shall be formed so as to have minimum interference with traffic. When and where available, bike routes and grass areas along the side of the road shall be utilized. Units will remain as close to the side of the road as possible and move in the direction of traffic if there is no bike trail or grass area.

(b) Road guards shall be utilized at all intersections. Road guards will wear reflective vests at all times. Road guards will not perform any type of exercise while posted at an intersection nor will they delay traffic once the unit has passed. Road guards shall proceed to intersections and wait alongside of the road (in a safe location) until their unit is within 100 meters of the intersection to stop traffic. Traffic shall not be impeded prior to this distance.

(c) Units smaller than a small platoon size (20 personnel) shall not impede traffic at any time and shall abide by the rules of the road as individual runners/pedestrians, depicted in Base Order 5560 with Change 6.

(d) Safety vehicles are prohibited from driving in bike lanes, on sidewalks and blocking intersections. Safety vehicles are required to follow the rules of the road and drive with hazard lights flashing. Safety vehicles shall not impede the flow of traffic and shall remain in their lane only. Stragglers should be considered hike/run drops and should move out of the traffic lane. Safety vehicles will not follow in trace of their unit. Safety vehicles should be staged along the route while utilizing these roads.

(14) When utilizing the access road up Pu'u Hawaii Loa Hill to KT, units will ensure that road guards are posted forward and aft of the formation. Formations must stay in "column of two," and keep to the outside of the road. Technicians on immediate repair missions are given priority over training. Unit commanders shall ensure that the lead and trail elements of all unit conditioning runs and hikes carry flashlights, chem-lights, or taxi-wands to ensure visibility by vehicular traffic during the hours of darkness. Lead and trail elements will wear road guard vests or belts during hours of darkness.

(15) Chanting, cadence, or clapping is prohibited in any housing area and adjacent roads, the perimeter road, WMA, anywhere off-base, or as otherwise depicted in this order.

15. Urban Patrolling In Base Housing. Urban Patrolling in base housing is approved training to take place in selected base housing IOT prepare the deploying units with the most realistic training environment possible. Training in the senior officer/hill top area will be made available to all units, via MCBH, S-3.

a. Before training begins

(1) Units requesting to use family housing for urban patrolling must submit a request via the RFMSS per Chapter 3 of this Order.

(2) Training units must coordinate with the installation RCO for a detailed brief five business days prior to the scheduled training.

(3) Upon completion of the brief, the unit will identify an appropriate number of controllers to help mitigate damage to personal property or an unsafe event involving a family member.

(4) Once the SOM and RM worksheet are approved, the RTAM office will notify Base Safety, Communication Strategy and Operations (COMMSTRAT), and MPD. RTAM will also inform COMMSTRAT to run an advertisement on Channel 2 for a period of five consecutive days prior to the start of the training event.

(5) The using unit must conduct a walk-around with a Range Control inspector on the first day of training, prior to beginning.

(6) The OIC/RSO must have on-hand the SOM and RM worksheet approved by the MCBH installation RCO.

(7) The OIC/RSO must ensure that all personnel participating in the exercise are aware of this SOP and all off limits areas or activities.

b. During training

(1) No weapons will be loaded with magazines or belts of linked ammunition.

(2) No blanks, SESAMS, smoke or CS grenades, or flash bang devices will be allowed.

(3) The authorized unit must stay within the boundaries of the approved TA.

(4) If any damage occurs to personal property, notify Range Control. All training must cease until the situation is resolved.

(5) Training units must not interfere with vehicular or pedestrian traffic or any base housing family members.

(6) Urban Patrolling in the base housing TA will only occur during the hours of 0900-1700, Monday through Friday.

(7) Night training will be considered on a case-by-case basis.

c. After training checklist

(1) Upon conclusion of training, a police call of the area must be conducted. All trash and debris must be removed by the training unit.

(2) If any abandoned housing was used, the OIC/RSO must ensure that all doors and windows have been shut and are properly secured.

(3) The training unit must complete a visual sweep of all areas that were used for training.

(4) A Range Control inspector will inspect the area with the OIC/RSO prior to securing the TA.

16. Classroom Facilities

a. The MCBH, S-3 maintains and schedules conference rooms and classrooms for use by units conducting official unit functions. The following rooms are available:

(1) Classrooms 1 through 5, located in Building 267.

(2) Classroom 6/6a/6b, located in Building 222, Room 209.

(3) Classroom 7, located in Building 1090.

(4) Classroom 8, 8A, 9 located in Building 221 top deck pool side.

(5) Classroom 10 is the KT Hill Conference Room and can be used for small unit classes or functions. However, priority for scheduling the use of the KT Conference Room will go to briefings during VIP visits.

b. Classrooms/conference rooms shall not be scheduled more than 90 days prior to the scheduled event for normal routine or repetitive events.

c. All Mobile Training Teams and base sponsored events can be scheduled up to 18 months in advance and have priority over routine or repetitive events.

d. The MCBH, S-3 may reprioritize the use of all classroom facilities based on emerging requirements. Activities in direct support of military training will have priority of scheduling. If a classroom space must be reassigned, MCBH, S-3 will make every effort to locate another venue for the activity/unit that previously reserved the classroom.

17. Martial Arts Training Areas

a. Warrior Pit 216. Warrior Pit 216, located behind the Legal Building and Base Safety, is a MCMAP Sustainment TA. Measuring 60 ft. in diameter, this pit is filled with shredded rubber to help ensure safer falls and allow units to participate in the MCMAP outdoors. The School of Infantry (SOI) West Detachment-Hawaii has priority for use, but units may schedule around their classes. Pits are scheduled via RFMSS.

b. Warrior Pit Boondocker. Warrior Pit Boondocker located at the BTA, is a MCMAP Sustainment TA. Measuring 60 ft. in diameter, this pit is filled with shredded rubber to help ensure safer falls and allow units to participate in the MCMAP outdoors. This pit is open to all units both on and off base, and requests will be scheduled according to the date submitted and priority. Pits are scheduled via RFMSS.

18. Recreational Fire (RECFIRE)

a. The mission of the recreational firing program is to promote marksmanship proficiency and firearm safety. This event is open to all military personnel and their guests, as well as local, state and federal law enforcement personnel, DoD civilians and contractors who work aboard MCBH. It is normally scheduled on the first Friday of the month 1300-1630. RECFIRE will not conflict with unit training. Practice fire of Table of Organization (T/O) weapons is also allowed if authorized by an individual's command.

b. The range availability for RECFIRE will be posted in the weekly "KBAZ" e-mail. All operational requirements and previously scheduled training will have priority on Kaneohe Bay RTF ranges. Ranges 1 (rifles), 2 (pistols and shotguns), and 5 (rifles, pistols, and shotguns), will be utilized based on availability. Contact Range Control prior to the scheduled date to determine what types of weapons will be allowed.

c. Ammunition and weapons are not provided. This is the responsibility of the shooter.

d. Range Details are as follows:

(1) Range Requirements

(a) Range Control will provide the required supervisory personnel, range, safety vehicle, and target to support the activity.

(b) The OIC is responsible for the overall direction and safe conduct of the recreation fire event.

(c) The RSO is responsible for the safe supervision and management of the range while training is in progress. The RSO assists the OIC in ensuring all range regulations are followed. The RSO will maintain communication with Range Control at all times.

(d) The Range Control FDO will maintain communication with the RSO, beach, and road guards. Members of the Range Control staff will check shooters in/out, inspect paperwork and weapons, and direct them to the Range OIC/RSO. Range Control will maintain folders with copies of the participant's weapons registration and hold harmless paperwork.

(2) Shooter Requirements

(a) Understand and sign the "Hold Harmless" agreement form.

(b) Understand and comply with all recreational firing regulations.

(c) Provide a copy of Hawaii State Firearms Registration paperwork for each firearm to be used.

(d) Check in and out of Range Control (Building 1584) upon entering and exiting the RTF. Firearms and paperwork will be inspected by Range Control staff when checking in.

(3) Guests Requirements

(a) If firing, must comply with all requirements listed under "shooter" above.

(b) Must be at least 12 years of age.

(c) Firing guests under the age of 18 must be supervised by their legal guardian.

(d) No more than two firing guests per military member.

(4) Practice Fire Requirements

(a) Active duty Marines and Sailors stationed aboard MCBH are authorized to fire their T/O weapons for practice during recreational fire.

(b) Any Marine/Sailor desiring to fire their T/O weapons during recreational firing must have a signed letter from their CO, authorizing them to utilize their T/O weapon during a specific recreational firing event.

(c) Any Marine/Sailor desiring to fire their T/O weapons during recreational firing must also have a Limited Technical Inspection (LTI) form completed by their unit armorer that is current within 30 days of the recreational firing event.

(5) Safety

(a) Every participant must comply with all safety regulations written and given verbally by the OIC, RSO, and PSO.

(b) Firearms and ammunition are required to be in a safe and serviceable condition and are subject to inspection by the RSO to determine their safe usage aboard the range.

(c) The OIC reserves the right to intervene and, if necessary, terminate an individual's participation or the entire activity when safe operation of the range is in jeopardy.

(d) All firearms will be handled IAW the Marine Corps' four weapons safety rules, weapons conditions codes, and range commands.

(6) Transportation

(a) Transportation of firearms and ammunition aboard MCBH must be in compliance with the current applicable Base Order(s).

(b) Any person transporting firearms small enough to conceal, must perform the following functions to the weapon(s): unload, encase in a lock-box/or apply trigger lock, and make inaccessible to the operator and passengers when in the vehicle. Ammunition must be kept separate from the firearm and in an area inaccessible to the operator and passengers.

(c) Upon arriving at the range, patrons will clear any/all personally owned weapons and present them to the Range Control staff who will

verify the serial numbers and registration paperwork. Patrons will then report to the designated range, where they will again present cleared weapons to the RSO for inspection.

(d) Carrying of rifles/shotguns on or to the range will be either at shoulder arms or sling arms, pistols will be cased/holstered or administratively carried "raised pistol".

(7) Ammunition

(a) Care must be taken when using hand loaded ammunition. The range RSO may direct that hand loaded ammunition may not be utilized if there is any reason to suspect it may malfunction or is unsafe to fire. Any ammunition acquired through an unknown source is not authorized for use.

(b) Ensure that your firearm is compatible with the caliber, type and charge of ammunition to be used (e.g., .38 Special, .38 +P, .357 magnum).

(c) Civilian ammunition is only authorized to be fired from privately-owned weapons.

(8) Targetry. Kaneohe Bay RTF will set up targets for all recreational firing events. Shooters may bring their own paper targets to place over the existing target backings.

(9) Personnel Protective Equipment. Protective eyewear, hearing protection and fully covered footwear are mandatory.

(10) Clean-up. Recreational firing participants are responsible for policing their own brass, trash, and target at the conclusion of the activity.

e. The assigned Range OIC is the immediate authority during any scheduled recreational firing event and is responsible for establishing the directives contained in this Order and all local range regulations.

f. The following POCs are listed for the Kaneohe Bay RTF:

(1) Operations Officer, Range Control (808) 257-2067.

(2) Range Chief (808) 257-3600.

(3) FDO (808) 257-3180.

(4) MCBH scheduler (808) 257-8816.

(5) Emergency 911.

g. Scheduling

(1) Unless the range is scheduled for unit training, or it falls under a holiday, patrons can expect the recreational firing program to be conducted as outlined in this Order.

(2) Personnel desiring to participate in recreational firing should inform Range Control of their intent by 1000 on the day of the event. In the event there are no scheduled participants, recreational firing will be cancelled for that day. There will be no "maximum" number of participants. The infiltration method of squading will be used (i.e., when a shooter is complete he/she vacates the firing point and upon clearance from the range staff, another shooter may occupy the firing point).

19. Parachute Operations

a. Scheduling. Prior to conducting any parachute operations, the unit desiring to conduct such training shall coordinate and schedule the airspace and the appropriate DZ requirements needed to support the operation. Scheduling of airspace and DZ requirements shall be done through the RFMSS. Attempting to schedule after aircraft are assigned often results in conflicts that interfere with training.

b. Restrictions. The following restrictions and safety precautions apply to all parachute operations.

(1) All parachute operations will be conducted in accordance with MCWP 3-15.7, Static Line Parachuting Techniques and Training. The RSO will have the final approval authority for jumps based on the wind condition. The RSO will suspend or cancel operations if, in their judgment, wind direction or wind gusts in combination with aircraft position make the event unsafe.

(2) During static-line parachute operations, the winds on the surface will not exceed 13 knots or 30 knots through the jump altitude. When utilizing Ram-Air parachutes, either static-line deployed or manually deployed, the winds on the surface will not exceed 18 knots and the winds through the jump altitude are unlimited.

(3) The RSO must maintain two-way radio communication with the drop aircraft and with Range Control. In the event of radio communication failure, operations shall be suspended until air to ground communication is re-established with the drop aircraft and with Range Control.

(4) All high altitude high/low openings shall be conducted in VFR conditions to include aircraft transit/pattern and jumper descent to DZ.

(5) Parachute operations will be conducted in designated DZ areas. Requests for parachute operations in areas other than established DZs will require advance approval and shall be coordinated in advance with the Range Scheduling Office.

c. Hazards. The Commander and RSO perform the following actions to reduce the risks associated with hazards:

(1) The Commander will ensure a risk assessment analysis has been conducted to determine the risk level for jumpers. If a high risk exists, select an alternate DZ that allows mission conduct at a lower risk level, if possible.

(2) The RSO shall complete a survey of the DZ no less than 24 hours prior to conducting live parachute operations in order to validate the DZ

survey and identify any potential hazards in and around the DZ. The results of the DZ assessment shall be included in the RM prepared by the unit conducting the parachute training.

(3) The RSO shall be physically located within the DZ. Prior to occupying the DZ, the RSO shall contact Range Control to receive a safety brief and provide Range Control with a brief scenario of the training to be conducted. The scenario shall include type aircraft, proposed start/stop times, and the type of personnel involved.

d. The OIC and the Person in Charge/Drop Zone Safety Officer (DZSO) will be required to report to Range Control to sign for the parachute event. The DZSO for jumpers will be certified per all requirements in MCO 3120.11 (Marine Corps Parachuting Policy and Program Administration) and Marine Corps Warfighting Publication (MCWP) 3-15.7 (Static Line Parachuting Techniques and Training). The DZSO must have a current MCBH RSO card and meet all the requirements set forth in this SOP. The DZSO must be a certified/current DZSO. The DZSO must provide the names of the two additionally required jumpmasters for personnel drops during the checkout process and list them on the face-to-face worksheet brief so Range Control can verify them with the CO's certification letter.

20. Range Safety Regulations

a. These four safety rules are the foundation for responsible weapons handling. These rules will be adhered to at all times:

- (1) Treat every weapon as if it were loaded.
- (2) Never point a weapon at anything you do not intend to shoot.
- (3) Keep your finger straight and off the trigger until you are ready to fire.
- (4) Keep your weapon on safe until you intend to fire.

b. Ranges will not be occupied until the OIC and RSO sign for the range. This includes setting up targetry and ammunition staging.

c. All weapons must have a LTI/Pre-Firing Inspection (PFI) prior to firing. LTI/PFIs are considered valid for 30 days from date of inspection.

d. No one is authorized to cross over protective berms or designated range boundaries at any time.

e. The OIC/RSO must ensure there is full observation of the impact area, SDZ and the airspace/water-space included within the SDZ/WDZ. If at any time a person, boat, or aircraft enters the SDZ/WDZ, the OIC/RSO must call and immediate "CHECK-FIRE". The OIC/RSO will then relay the pertinent information to Range Control.

f. The RSO must be physically present on the range at all times. This includes occasions when the unit is in an occupied or bivouac status. The OIC and medical support, if required, along with the safety vehicle and driver must be physically present on the range while live-fire is in

progress. The medical support cannot be a participant in training while performing medical support duties. In the event of an emergency, the Corpsman/Medic is the first responder and has the primary duty of providing first aid and/or emergency medical care as needed. Range Control must be notified immediately in the event of an emergency.

g. Everyone is a Safety Officer. Anyone can call a "CEASE-FIRE" if they observe any unsafe condition. Whenever the command "CEASE-FIRE" is given, all shooters will immediately "CEASE-FIRE", "UNLOAD" and "SHOW CLEAR". After showing clear, bring weapon to Condition 4 status. Weapons will be pointed in a safe direction at all times.

h. All range lateral and vertical limits are clearly marked and will be adhered to at all times. No one will intentionally shoot to the left/right/above or below the limit markers. Targets will not be placed in such a way that engaging them will cause rounds to impact outside the range impact area. It is the RSOs duty to ensure that targets are placed so that projectiles fired or launched at that target land within the range impact area boundary. Anyone witnessing projectile impacts outside of the impact area must immediately call "CEASE-FIRE".

i. Firing directly into the Ulupa'u Crater Wildlife Management Area (WMA) or the Pu'u'loa impact berm projectile containment wall is strictly prohibited. Extreme caution shall be exercised to preclude direct fire and or stray rounds from entering the WMA.

j. In the event of a fire:

(1) All firing will cease.

(2) The OIC/RSO will immediately notify Range Control that a fire has started and provide the location and size.

(3) On order, the OIC/RSO will evacuate all personnel, weapons, ammunition, vehicles and equipment to a designated area.

(4) The OIC/RSO will report status of all personnel and equipment to Range Control.

k. No tracer rounds, incendiary ammunition, illumination, or pyrotechnic devices will be utilized without specific approval.

l. If there is a weapons stoppage and/or malfunction, and it cannot be cleared, contact Range Control for assistance. Range Control will contact EOD, if required.

m. All personnel must wear at a minimum, approved hearing protection. Eye protection is recommended while conducting live-fire. Plate carriers and helmets will be worn at all times while conducting live-fire and maneuver or firing high explosive (HE) munitions.

n. Radios will be issued by Range Control and will be monitored at all times. Positive radio communication must be maintained with Range Control. The call sign for the ranges are the letter/number identifier of that range

(i.e., R-9, R-1, etc.), or by unit and training area (i.e., B 1/3 in TA-2). Hourly radio checks are required.

o. In the event of a weapon malfunction and the ammunition is found to be defective, "CEASE-FIRE" will be called and live-fire will stop. Range Control will be notified and will coordinate with the proper personnel to ensure the ammo is inspected and cleared for use or turned in if warranted. Continued use of faulty ammunition will not be permitted IAW MCO 8025.1.

p. OIC/RSO will conduct a post-fire inspection of all weapons used. This includes conducting a thorough check to ensure all weapons' chambers are free of ammunition, magazines are clear, and ammunition storage pouches are empty of ammunition. All personnel will verbally declare "I have no brass or ammo" during line out procedures at the conclusion of training. Any unfired ammunition must be turned into the RSO or a range block official. In the event that ammunition or ammunition residue is discovered off of either RTF, it is the finder's responsibility to report and turn it in to the first person in their chain of command. Although there is an Amnesty Can located at the main gate to the Kaneohe RTF, it is not designed to receive a unit's unexpended ammunition. All efforts shall be made to "line out" training personnel.

q. Blank and live ammunition will never be mixed. Strict accountability procedures will be employed to ensure they remain separate. Blank and live ammunition will not be stored in or issued from the same building at the same time. Additionally, blank and live ammunition will not be utilized or stored on ranges at the same time. If the use of blanks is necessary the OIC/RSO will ensure separate storage sites are utilized for blank and live ammunition.

r. Class 1, 2, and 3A lasers are authorized on all ranges. Class 3B and 4 lasers are only authorized on Ranges 1, 5 and 10. Refer to Chapter 8 for additional information.

21. Range Cards. Specific information including authorized weaponry and ammunition regarding MCBH ranges can be found in Appendix R, MCBH Range Cards.

22. MCAS Training Areas

a. Helicopter Landing Area. The authorized helicopter landing areas within the flight line property aboard MCBH is Helicopter LZ West Field. Helicopter landings at any other location must have prior approval of Airfield Operations. Requests, via the appropriate chain of command, should arrive at MCAS Airfield Operations at least five business days prior to usage.

b. West Field. West Field is the helicopter operating area linked to, and located northwest of, Runway 04/22. This area contains helicopter parking areas, a troop cargo staging area, an external pickup and hover pad, an ordnance assembly building, a tactical Airfield Fuel Dispensing System unit, CLZ for LCAC aircraft and corresponding taxiways. A simulated ship deck oriented 040/220 degrees magnetic is painted at the north end for helicopter Field Carrier Landing Practice training. West Field operations

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are closed to nonessential aircraft when utilized for ordnance loading/staging.

Chapter 7

Ammunition and Explosives

1. Ammunition and Explosives. The authorized ammunition to be used on MCBH RTAs will be U.S. Government standard ammunition per MCO 8011.5. The only exception is civilian law enforcement agencies and specifically authorized recreational firing events. The specific types of ammunition authorized for use on MCBH RTAs can be found in Appendix G.

2. Non-standard Ammunition and Explosive

a. Non-standard ammunition and explosive items are prohibited unless specifically approved by Commander, Marine Corps Systems Command.

b. Requests to use non-standard ammunition, explosives or foreign ammunition on MCBH training ranges will be submitted 60 days in advance of the event to the CO, MCBH for approval.

c. Altering fixed ammunition, such as increasing the amount of propellant, is prohibited.

3. Alteration of Ammunition. The alteration of Class V supplies is not authorized under any circumstances.

4. Blank Ammunition

a. Utilization of blank ammunition will be approved by Range Control. Considerations for usage are based off of current fire restriction, time of day, and other factors. Blanks are not authorized during fire restrictions. Personnel will be instructed by unit OIC/RSOs on the safety precautions for firing blank ammunition prior to training. Blanks will be visually inspected prior to use, to ensure safe condition.

b. Particular care will be taken to ensure that blank ammunition and live ammunition are never mixed. Blank and live-fire ammunition will not be stored in or issued from the same building at the same time. Additionally, blank and live ammunition will not be utilized or stored, on the same range at the same time.

5. Field Staging Areas. No projectile will be fired over ammunition magazines or field staging areas. Firing is not permitted if the SDZ for the weapon falls within any designated field staging area. Ammunition placed on ranges will be guarded at all times by armed guards. Staged ammunition will be covered to protect it from the natural elements. Precautions will be taken to prevent accidental ignition or detonation. Ammunition will never be buried.

6. Ammunition Malfunctions

a. Ammunition handling procedures are contained in reference (1). Ammunition that fails to perform as expected can normally be attributed to a malfunction, human error, or a weapon/equipment deficiency. In all instances, facts surrounding the matter must be immediately noted and

reported per reference (m), so that remedial action can be initiated to preclude a recurrence.

b. If an ammunition malfunction occurs, a cognizant, designate agent shall conduct a detailed technical investigation based on the data provided by the user in the malfunction report. To ensure that the report contains the proper data, persons on the scene must take notes on the elements listed below as they relate to the particular situation. If any ammunition malfunction occurs, the unit ammunition technician will submit a malfunction report reflecting the following information:

(1) Record the time, date, weather condition, and details of what occurred.

(2) Identify the item(s) involved and condition of ammunition before firing.

(3) Identify the weapon/device used and any pertinent information that pertains to the firing of that weapon.

c. Malfunctions involving injuries/fatalities/weapons damage or resulting in a local suspension will be telephonically reported immediately to MARCORSSYSCOM, (PM Ammo) DSN 378-8756 or commercial (703) 432-8756 during working hours and to the Headquarters Marine Corps, Operations/Command Center (DSN) 225-5454 or commercial (703) 695-5454 during non-working hours. This is essential to ensure that other Marines training with like ammunition worldwide are protected from possible further injuries. Additionally, the malfunction report must be submitted via Naval Message within 24 hours of the incident. The initial telephonic report does not negate the requirement for submission of the required Naval Message submission.

d. All other malfunctions not involving injuries/fatalities/weapons damage (i.e., duds, misfires, etc.) shall be reported via Naval Message within 96 hours of the malfunction. In the event Naval Messaging is not available, Malfunction Reports will be submitted via email to USMAmmoMalfunctions@usmc.mil, AmmoMail@usmc.mil, FLBK-MALF@navy.mil, LGR_NSWC_INSERTVAMMO@navy.mil and DLGR_NSWC_INSERTVAMMO@navy.mil.

e. Malfunction report format and data elements can be found in the MCO 8025.1 pages 9-16.

f. Unused or unserviceable ordnance will not be reported as duds but returned to the ammunition supply point by the training unit. Misfires and hang fires will be cleared by the training unit. The training unit will apply the proper immediate or remedial action. If needed, notify Range Control. If notification of EOD is needed, ensure proper ammunition malfunction reporting is concurrently conducted.

g. Any person having knowledge of the whereabouts of live ammunition, pyrotechnics, abandoned ammunition or potentially hazardous ammunition will report such information to Range Control.

7. Explosive Ordnance Disposal

a. The mission of EOD is to locate, identify, and neutralize explosive ordnance hazards posing a threat to personnel, equipment, material, and the installation, which are beyond the capability of other occupational skills.

b. Do not pick up anything which might have once been ordnance. Contact Range Control or call EOD at (808) 257-7112. If after hours, call the duty Technician at (808) 216-6215, the supervisor at (808) 620-1638, or Range Control to report any findings.

8. Missing, Lost, Stolen, and Recovered (MLSR) Reporting. The MLSR reporting system was designed to enable the Marine Corps to centrally track material losses and to help identify trends and areas where security enhancements may be required. MLSR reports are only required if actual gains or losses have occurred.

a. MLSR reports will be generated as soon as possible but not later than 48 hours after the occurrence. Delayed report will include the reason for the delay on the report.

b. For MLSR reportable items and quantities, refer MCO 5530.14, page 264, paragraph 7.

c. For an example of a MLSR report, refer to MCO 5530.14, figure 10-1.

9. Transporting, Handling, and Storage

a. General. It is imperative that units arriving at MCBH are familiar with their corresponding regulations governing these subjects. MCO 8020.10, Marine Corps Ammunition Management and Explosive Safety, governs policies and procedures associated with the use, storage, and accountability of Class V "W" ammunition and explosives. NAVSEA SW020-AF-HBK-010, Transportation Safety Handbook for Ammunition Explosives and Related Hazardous Material, governs transportation of Ammunition Explosives and Related Hazardous Material.

b. Transportation. Vehicles transporting ammunition will be placarded IAW NAVSEA OP 2239, NAVSEA SW020-AC-SAF-010, NAVSEA SW020-AF-HBK 010 and CFR 49. Ammunition will be on pallets, strapped down and covered with a fire retardant tarp when staged, stored and transported on RTFs. Vehicles transporting ammunition on the RTFs will be equipped with one dry chemical fire extinguisher (10 pound B:C or higher rating) and will be ground-guided at all times. Military tactical vehicles and Government Service Administration commercial pickup trucks are the only vehicles authorized to transport ammunition on the RTF. The following is a list of vehicle-specific documents that shall accompany any ammunition and explosives being transported on/off base.

- (1) Current trip ticket (military vehicles).
- (2) Hazardous Material route plan/Convoy Brief and Map.
- (3) DD form 626 Motor Vehicle Inspection.

(4) DD form 2890 DoD Multimodal Dangerous Goods Declaration (off base).

(5) SF-91 Accident form.

(6) Emergency Response Guide (ERG) (Guide #112 & 114).

(7) SW020-AF-HBK-010 (glove box edition).

c. Qualified Drivers. Drivers of any vehicle transporting ammunition or explosives aboard the MCBH RTC shall meet specific administrative and medical criteria, per 49 CFR 391.41 391.49 and NAVSEA SW020-AF-HBK-010. In accordance with the references listed above, the following is a list of documents that all Ammunition and Explosives Drivers are required to have while transporting ammunition:

(1) Up to date civilian driver's license or Form NV 75 for out of state expired driver's license.

(2) OF-346 with "Explosives" endorsement.

(3) Up to date medical examiners certificate signed by a medical officer.

d. Handling. Supported unit ammunition technicians serve as the Command subject matter expert for the administration and management and handling of Class V (W). In accordance with the MCO 8010.13 if no ammunition technicians are available to complete the requisitioning/receipt process, it is recommended the commander assign ammunition handlers to accomplish complete the requisitioning/receipt process in order to maintain two person integrity. Ammunition handlers shall be screened in accordance with MCO 5530.14 and MCO 8023.3. Ammunition handlers listed to "receive" on the NAVMC 11797 form shall complete the following web-based training as well as be AA&E screened in accordance with MCO 5530.14 and MCO P4400.150. For any questions regarding ammunition handling, please contact the MCBH Explosive Safety Officer at (808) 257-2096.

(1) Ammo-18, Basics of Naval Explosives Hazard Control.

(2) Ammo-45, introduction to Ammunition.

(3) Ammo-51-MV (web-based), Naval Motor Vehicle Inspection.

e. Storage. Only approved storage sites aboard MCBH RTA's are available for use. For questions on site availability, contact Kaneohe Bay Range Control at (808) 257-3180.

f. POVs. Using POVs on the MCBH RTC to load, store, or transport ammunition, pyrotechnics, or explosives of any kind for military training is prohibited.

g. Ammunition Requests. Marine Corps units planning to conduct training aboard MCBH shall coordinate ammunition requirements with the Installation Ammunition Supply Point (ASP). MCBH ASP can be reached at (808) 257-8400 or (808) 257-5229.

10. Duds

a. A dud is ammunition, of any caliber or weight, that has been fired, placed, dropped, thrown, or launched, but which fails to function as designed. Duds found outside an impact area or in a TA, must be reported to Range Control immediately. Do not disturb a dud or UXO in any manner.

b. The OIC will record the location of and report all UXO (dud) to Range Control. In the case of grenades or other munitions that may be immediately hazardous to personnel (that is, bursting radius), firing will be halted until qualified EOD personnel clear the dud. In other cases, firing need not be halted.

c. If a unit experiences a 5% dud rate or higher from their lot, they must cease using that lot.

d. Demolition materials like C4 or TNT which fail to function are misfires, not duds.

11. Misfires and Hang Fires

a. A misfire is defined as the failure of a primer, projectile propelling charge, a line charge, or demolition material to function. In the interest of safety, all misfire procedures shall be completed on the range.

b. Misfire procedures in training manuals for the appropriate weapon system will be followed. In the event misfires present an immediate hazard to personnel or a cease-fire is necessary, they will be reported to Range Control.

c. A hang fire is an undesired delay in the functioning of a firing system.

d. A hang fire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time frame.

12. Chemical Munitions

a. Chemical munitions are defined as agents or munitions which, through its chemical properties, produce lethal or other damaging effects on human beings. The term does not include riot agents, chemical herbicides, smoke and other obscuration materials.

b. Live chemical munitions shall not be used for training purposes at MCBH RTAs.

13. Smoke and Other Obscuration Materials

a. Smoke, and other obscuration materials shall be used only during scheduled training, per the provisions in applicable TM and directives, as improper use may result in injury.

b. CS is not permitted to be used anywhere outside of the "gas chamber".

c. OIC and RSOs must be CBRNE qualified when conducting CBRNE training.

14. Rounds Fired Off-Range. Rounds fired off-range must be immediately reported to Range Control. This requirement complies with the 1997 Military Munitions Rule Amendments to the RCRA.

a. If a munition lands off-range, and is not promptly rendered safe or retrieved, the munition becomes a solid and hazardous waste. Any imminent and substantial threats must be addressed.

b. If remedial action is not feasible, the RCO will maintain a record of the event for as long as any threat remains. The record shall include the munitions type (DODIC and nomenclature) and location (to the extent the location is known).

15. Materials Potentially Presenting & Explosive Hazard (MPPEH). It is imperative that all units render MPPEH into Material documented as Safe (MDAS) before leaving the RTC in accordance with reference (b). Following the range going cold, all units will conduct police call of the range area utilized. All personnel shall be properly cleared to include shake down procedures conducted by the RSO. All A&E Dunnage/MPPEH shall be collected and separated. MPPEH shall then be rendered MDAS by a trained certifier and verifier. The MDAS process will be captured on a DD FORM 1348, to include a MDAS statement, prior to leaving the RTC. MDAS will be turned into MCBH Recycling Center in a timely manner. If MDAS is required to be stored temporarily at the unit prior to turn in, it shall be secured with limited access and a DD Form 1348.

Chapter 8

LASER Operations

1. LASER Operations. This chapter details the operating procedures and precautions to prevent injury to personnel and material damage from exposure to LASER radiation. Only ranges certified for LASER use may be used for LASER operations.

2. Background

a. The word LASER is an acronym derived from a description of the physical process: Light Amplification by Stimulated Emission of Radiation. The LASER generates a beam of intense, monochromatic light that is usually invisible under normal operating conditions. The basic hazard associated with LASER light is eye damage. This damage can vary from a small burn, undetectable by the injured person, to severe vision impairment. Eye damage by LASER light occurs three ways:

(1) Intrabeam or direct viewing.

(2) Specular reflection.

(3) Diffuse reflection.

b. Direct viewing is the most hazardous form of damage, as the light beam is focused directly on the retina. Specular (mirror-like) reflections redirect the light beam and cause the same eye damage as direct viewing. Diffuse reflections occur when the LASER beam intercepts a rough surface and is reflected in a scattered pattern. The use of appropriate eyewear (goggles or visors) with the correct Optical Density for the wavelength of the LASER will eliminate the ocular hazards associated with LASERS.

3. Definition of Terms

a. Diffuse Reflection. The scattering of LASER light as it reflects off of a rough surface.

b. Divergence. The increase in the diameter of the LASER beam as the distance from the aperture of the LASER increases.

c. Maximum Permissible Exposure. The level of radiation a person may be exposed to without hazardous effect.

d. Normal Ocular Hazard Distance (NOHD). The distance from the LASER beyond which a LASER exposure does not exceed the exposure limit.

e. Optical Density. Refers to the amount of filtration of the eyewear (goggles or visors) required to reduce the LASER radiation to levels below the exposure limit.

f. Specular Hazard. A shiny or mirror-like surface. Examples are vehicle windows, polished metals, ice, standing water, and chrome bumpers.

4. LASER Safety Program

a. Prior to conducting any LASER operations, Range Control must establish LASER safety programs, which include at a minimum the following elements:

- (1) LASER Safety Regulations.
- (2) LASER Safety Training Program.
- (3) LASER Protective Goggles and Equipment Program.

(4) Medical Surveillance Program for the use of Class 3 and below LASER systems, per MCO 5104.1 and MCO 3570.1 Range Safety.

b. The LASER Range Safety Report for MCBH can be found in Appendix S.

5. LASER Use on MCBH Ranges

a. All units conducting LASER operations must have a LRSO assigned. The LRSO is responsible for ensuring all range regulations in this Order and other applicable USMC range policies are adhered to and enforced. A copy of the LRSO appointment letter must be forwarded to Range Control for input into RFMSS prior to that unit's use of MCBH LASER ranges. The LRSO responsibilities shall not be delegated and the LRSO may have no other duties during the training, unless appointed as the RSO IAW DA PAM 385-63 and MCO 3570.1C. The unit LRSO may serve as the RSO IAW MCO 3570.1, after successful completion of the MCBH Range Safety Certification Course.

b. The LRSO must provide a detailed LASER Range Safety Brief to the RCO or Range Operations Officer two working days prior to conducting LASER operations.

c. When scheduling a LASER range, the TA must be scheduled and approved through RFMSS. Scheduling requests shall list types of LASERs to be used.

d. Prior to conducting LASER operations at the scheduled range(s), the LRSO will ensure no specular hazards exist in the TA.

e. The LRSO will ensure personnel are briefed with information prior to commencing LASER operations including range boundaries and lateral limits of fire.

f. Only personnel authorized by the unit LRSO shall operate LASERs. All operators shall receive training prior to operating any LASER on the following aspects of LASER operations:

- (1) Operation of the LASER system.
- (2) Hazards and safety precautions relative to LASER operations in general.
- (3) All provisions of this chapter.

- g. There shall be no LASER firing during rain, fog or any other inclement conditions.
- h. Cease LASING immediately if unidentified personnel/aircraft enter the LASER danger zone.
- i. When LASING, the LASER must always be pointed down range or towards the target/impact area.
- j. LASERs shall not be directed above the horizon.
- k. Aircraft must never be LAZED.
- l. LASERs shall not be activated until the target has been positively identified by the operator.
- m. LASER firing logs will be maintained by RFMSS. Ensure that the expenditure report lists the LASERs that were utilized during the training event. A LASER Firing Log can be found in Appendix S.
- n. The LASER exit port (aperture) must be covered or the batteries removed whenever the LASER is not engaged in tactical operations on a LASER range.
- o. Range guards with radios must be posted at each of the access routes to the LASER range.
- p. LASING shall cease if communication is lost with any of the personnel participating in the LASER training. Units conducting LASER operations must maintain constant communications with Range Control and shall cease LASER operations if communication is lost. LASING is not to resume until communication with Range Control has been reestablished.
- q. Batteries shall be removed from the LASER at the completion of each day's use and whenever the LASER is located outside the range area.

6. Allowable LASER Systems

a. Only those systems approved for use through the USMC Training and Education Command, RTAM Division, properly procured USMC LASER systems, and systems certified by MCBH are authorized for use.

b. Units are responsible to ensure the system(s) to be used meet the allowable platform, maximum allowable buffer, and/or maximum allowable NOHD for a selected LASER range.

7. LASER Range Safety Survey Report. An on-site LASER safety survey was performed for certification of the MCBH LASER Range, Kaneohe Bay RTF. This report authorizes the use of Class 3B/4 LASERs for training on Range 5 and Range 10 of Kaneohe Bay RTF. The following conditions, limitations and disclaimers apply to the survey:

a. Force-on-force scenarios were not evaluated in this report and should not be allowed without the expressed consent of the range LSSO using safety measures established by the LASER Safety Range Board. Instrumented Tactical



Figure 8-2. Authorized Target Area for Range 10

Firing Point (FP)	TA	MAXIMUM ALLOWABLE BUFFER	LATERAL LIMITS (MAGNETIC)
Range 5	Target Area	15 mrad	Left Lateral Limit: 21° Right Lateral Limit: 38°
FP Coordinates (MGRS)		04QFJ3179272705	
TA Coordinates (MGRS)		04QFJ3207073167 04QFJ3209573207 04QFJ3220873288 04QFJ3229373232 04QFJ3223573107 04QFJ3219973075	
Approved Platforms		Tripod mounted systems Hand-held systems (Stabilized and non-stabilized)	
Table 8-1. Range 5 LASER Limitations			

1. The lateral limits for the range are marked with yellow/black striped (zebra) signs located in the impact area. A shooter's individual	TA	MAXIMUM ALLOWABLE BUFFER	LATERAL LIMITS (MAGNETIC)
---	----	--------------------------	---------------------------

lateral limits are the left and right sides of his/her intended target. Firing Line (FL)			
Range 10	Target Area	10 mrad	Left Lateral Limit: 60° Right Lateral Limit: 72°
FL Coordinates (MGRS)		04QFJ3139973012 04QFJ3140373000 04QFJ3140472989 04QFJ3140472974	
TA Coordinates (MGRS)		04QFJ3207073167 04QFJ3209573207 04QFJ3220873288 04QFJ3229373232 04QFJ3223573107 04QFJ3219973075	
Approved Platforms		Tripod mounted systems Hand-held systems (Stabilized)	
Table 8-2. Range 10 LASER Limitations			

c. Safety

(1) Fire Control and Precautions

(a) Limits of Fire

1. The lateral limits for the range are marked with yellow/black striped (zebra) signs located in the impact area. A shooter's individual lateral limits are the left and right sides of his/her intended target.

2. Table 8-3 details the lateral limits for Ranges 5 and 10.

(b) Firing Point Range 5 (pavilion) Grid 04QFJ3179272705.

(c) Firing Line Range 10 (crater rim) Grid.

1. 04QFJ3139973012.

2. 04QFJ3140373000.

3. 04QFJ3140472989.

4. 04QFJ3140472974.

OPERATIONAL SITES	LATERAL LIMITS (MAGNETIC)
Range 5	Left Lateral Limit: 21° Right Lateral Limit: 38°
Range 10	Left Lateral Limit: 60° Right Lateral Limit: 72°
Table 8-3. Range Lateral Limits	

(2) General Safety Requirements. All LASER operators should meet the following minimum requirements:

(a) Have received the appropriate LASER range briefing from Range Control prior to use of any LASER range.

(b) Be familiar in detail with the MCBH LASER Safety Program and adhere to the procedures established therein.

(c) Communicate with Range Control during LASER operations.

(d) Fire LASER only after positive identification of the approved targets.

(e) If standing water, glass, or any other reflective materials becomes present within or near any of the established LASER Hazard Danger Zone (LHDZ), then it will be the responsibility of the RSO to suspend the exercise until the situation can be corrected.

(f) Prior to ground lasing operations, a visual inspection should be made to ensure safe LASING.

(g) The RSO will ensure that all personnel in the vicinity of the LASER range remain outside the LHDZ during LASER operations or wear the appropriate eye and skin protection if within the LHDZ.

(3) Planning Requirements. The request for use of Class 3B/4 LASERS is scheduled through RFMSS and approved by MCBH RCO. A LRSO is a mandatory requirement and must be present on the range during all training involving Class 3B/4 LASER.

APPENDIX A

ACRONYMS & DEFINITIONS

The acronyms and definitions listed below are pertinent to this Order and are used throughout.

ACRONYMS

A/V	Audio/Visual
AATA	Amphibious Assault Training Area
AAV	Amphibious Assault Vehicle
AGL	Above Ground Level
ALO	Air Liaison Officer
APOBS	Anti-Personnel Obstacle Breaching System
ARFF	Airfield Rescue and Firefighting
ASP	Ammunition Supply Point
ATC	Air Traffic Control
ATCSO	Air Traffic Control Station Officer
BFA	Blank Firing Adaptor
BFX	Battle Field Simulations
BLS	Beach Landing Site
BO	Base Order
BOTA	Barrier Obstacle Training Area
BSC	Battle Simulation Center
BTA	Boondocker Training Area
CACCTUS	Combined Arms Command & Control Training Upgrade System
CALA	Combat Aircraft Loading Area
CALFEX	Combined Arms Live-fire Exercise
CAN	Combined Arms Network
CASEVAC	Casualty Evacuation
CAST	Combined Arms Staff Trainer

CATEX	Categorical Exclusion
CBRNE	Chemical, Biological, Radiological, Nuclear, and high-yield Explosives
CCS	Combat Convoy Simulator
CDC	Child Development Center
CENTCOM	Central Command
CFA	Controlled Firing Area
CLZ	Craft Landing Zone
CO	Commanding Officer
COA	Certificate of Waiver or Authorization
COMCAM	Combat Camera
COR	Contracting Officer's Representative
CP	Command Post
CPX	Command Post Exercises
CRB	Course Rules Brief
CRRC	Combat Rubber Raiding Craft
CS	O-Chlorobenzylidene Malonitrile Gas
CTD&S	Combat Training Devices & Simulators
CVOC	Combat Vehicle Operators Course
D-NOTAM	Distance Notice to Airmen
DOD	Department of Defense
DODIC	Department Of Defense Identification Code
DZSO	Drop Zone Safety Officer
DSN	Defense Switched Network
DVD	Digital Video Disc
DVTE	Deployable Visual Training Environment
DZ	Drop Zone
EA	Environmental Assessment

EC&PD	Environmental Compliance & Protection Department
EIS	Environmental Impact Statement
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EOD	Explosive Ordnance Disposal
EOL	End of Orienting Line
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAC	Forward Air Controller
Fed Fire	Federal Fire Department
FOB	Forward Operating Base
FOD	Foreign Object Damage
FP	Firing Point
FPG	Fire Prevention Group
ft.	foot/feet
GP	Gun Position
HAZMAT	Hazardous Material
HCF	Honolulu Control Facility
HE	High Explosive
HEAT	HMMWV Egress Assistance Trainer
HEDP	High Explosive Dual Purpose
HLZ	Helicopter Landing Zone
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HPD	Honolulu Police Department
HRST	Helicopter Rope Suspension Techniques
IAW	In Accordance With
IC	Incident Command

IED	Improvised Explosive Device
IE&L	Installations, Environmental & Logistics
in.	inch, inches
IOT	In Order To
IPAC	Installation Personnel Administration Center
ISE	In-Service Engineer
ISMT-E	Indoor Simulated Marksmanship Trainers-Enhanced
I-TESS	Instrumented Tactical Engagement Simulations System
ITG	Initial Terminal Guidance
ITK	Infantry Tool Kit
KT	Kansas Tower
LAV	Light Armored Vehicle
lbs.	pounds
LCAC	Landing Craft Air-Cushioned
LCU	Landing Craft Utility
LE/LF	Environmental and Facilities Departments
LFAM	Live Fire and Maneuver
LHDZ	Laser Hazard Danger Zone
LNМ	Local Notice to Mariners
LRC	Leadership Reaction Course
LRSO	Laser Range Safety Officer
LSO	Landing Safety Officer
LSSO	Laser Systems Safety Officer
LTI	Limited Technical Inspection
LZ	Landing Zone
MAET	Modular Amphibious Egress Trainer
MAG	Marine Aircraft Group
MAGTF	Marine Air/Ground Task Force

MARFORPAC	Marine Forces Pacific
MCAS	Marine Corps Air Station
MCBH	Marine Corps Base Hawaii
MCCS	Marine Corps Community Services
MCMAP	Marine Corps Martial Arts Program
MCO	Marine Corps Order
MCTAB	Marine Corps Training Area Bellows
MCWP	Marine Corps Warfighting Publication
MEB	Marine Expeditionary Brigade
MEDEVAC	Medical Evacuation
MET	MRAP Egress Trainer
MEU	Marine Expeditionary Unit
MGRS	Military Grid Reference System
MM	millimeter
MRAD	milliradian
MRE	Meals Ready To Eat
MRV	Marine Reconnaissance Vehicle
MOUT	Military Operations in Urban Terrain
MPD	Military Police Department
MPH	miles per hour
MRAP	Mine Resistant, Ambush Protected
M&SD	Modeling & Simulation Division
MSL	Mean Sea Level
MTU	Marksmanship Training Unit
MTVR	Medium Tactical Vehicle Replacement
NAS	National Airspace System
NCO	Noncommissioned Officer
NEW	Net Explosive Weight

NLT	No Later Than
NM	Nautical Miles
NMCRS	Navy/Marine Corps Relief Society
NOHD	Normal Ocular Hazard Distance
NVD	Night Vision Devices
OCC	Operations Control Coordinator
ODS	Operator Driving Simulator
OIC	Officer-In-Charge
OSC	On-Scene Commander
PAO	Public Affairs Office
PCS	Permanent Change of Station
PFI	Pre-Firing Inspection
PFT	Physical Fitness Test
PIC	Pilot-In-Command
PM TRASYS	Program Manager, Training Systems
POC	Point of Contact
POV	Privately-Owned Vehicle
PPE	Personal Protective Equipment
PSO	Position Safety Officer
PWM	Pacific War Memorial
RAC	Risk Assessment Code
RCO	Range Control Officer
RCF	Range Control Facility
RFMSS	Range Facility Management Support System
RM	Risk Management
RSO	Range Safety Officer
RSOP	Recon, Selection, Occupation of Position
RTA	Range Training Area

RTAM	Range and Training Area Management
RDT&E	Research, Development, Test & Evaluation
RTF	Range Training Facility
RTISS	Range Training and Instrumentation Systems Support
SACON	Shock Absorbing Concrete
SAR	Search And Rescue
SAVT	Supporting Arms Virtual Trainer
SAW	Squad Automatic Weapon
SBF	Support by Fire
SDZ	Surface Danger Zone
SESAMS	Special Effects Small Arms Marking System
SIO	Safety Insert Officer
SMART	Sports Medicine and Rehabilitation Team
SNCO	Staff Noncommissioned Officer
SOM	Scheme Of Maneuver
SOP	Standard Operating Procedure
SPIE	Special Patrol Inserts/Extracts
SRTA	Short Range Training Ammunition
SVET	Submerged Vehicle Egress Trainer
SVFR	Special Visual Flight Rules
TA	Training Area
TAMC	Tripler Army Medical Center
TERF	Terrain Flight
TCCOR	Tropical Cyclone Condition of Readiness
T&E	Traversing & Elevation
T&R	Training and Readiness
TECOM	Training and Education Command
TIED	Training Improvised Explosive Device

TM	Technical Manual
TMIT	Trackless Mobile Infantry Targets
TNT	Trinitrotoluene
T/O	Table of Organization
TSC	Training Support Center
TT	Turret Trainer
UC	Unified Command
U.S.	United States
UAS	Unmanned Aircraft System
USAR	Urban Search And Rescue
USCG	United States Coast Guard
USMC	United States Marine Corps
UTM	Ultimate Training Munition
UXO	Unexploded Explosive Ordnance
VFR	Visual Flight Rules
VFST	Virtual Fire Support Trainer
VHF	Very High Frequency
VIP	Very Important Person
WBGT	Wet Bulb Globe Temperature
WFO	Water Front Operations
WGS	World Geodetic System
WMA	Wildlife Management Area
WP	White Phosphorus
WST	Weapon System Train

DEFINITIONS

Air and Ground Range Control Facility: This facility provides safety, control, maintenance, and administrative functions for aviation, ground, and combined-arms training activities on RTAs, to include both live-fire and non-live-fire events. Ground functions for this facility encompass land RTAs. Range Control is this type of facility.

Air Sentry: An individual designated by the OIC of Firing to maintain surveillance of an assigned sector of airspace to warn of the approach of aircraft.

Bivouac Area: An area assigned for administrative and logistical functions, such as troop billeting. Field training and live-firing are not conducted within bivouac areas.

Bivouac Operations: Those operations involving troop administrative and logistical functions; troop field billeting.

Cantonment: An area assigned for administrative and logistical function, such as housing, troop billeting, offices, storage and maintenance areas. Normally field training and live-firing are not conducted within cantonment areas.

Deviation: A departure from the requirements and/or procedures of this order.

Drop Zone: A tactical landing zone in which personnel or cargo paradrops are authorized.

Dud: Ammunition of any caliber or weight that has been fired, placed, dropped, thrown or launched but which fails to function as designed.

Explosive Ordnance: Ordnance which has become hazardous by damage or deterioration, when the disposal of such explosive ordnance requires techniques, procedures, or equipment, which exceeds the normal requirements for routine disposal.

Explosive Ordnance Disposal: The detection, identification, field evaluation, rendering-safe, recovery, and final disposal of unexploded explosive ordnance. It may also include the rendering-safe and/or disposal of explosive ordnance.

Field Training Areas: Those areas designated for a specific type of training, normally not requiring the use of live ordnance.

Fire and Movement/Maneuver Range: Range on which troop movement and live-firing may be conducted simultaneously.

Fire Danger Rating: Forestry Service rating based on weather conditions and fire burning indices describing the potential for ignition, rate of spread, and suppression probability with regard to fires.

Firing Lane: The area within which a weapon system is fired. It consists of a start firing line, cease-firing disarm line, and left and right limits of fire.

Firing Line or Point: The location from which a weapon is fired at a target or into an impact area.

Hang Fire: An undesired delay in the functioning of a firing system. A hang fire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time frame.

Impact Area: Impact areas are areas within and above an operational range used to contain fired or launched military munitions.

Impact Area and High-Hazard: A permanently-designated impact area used to contain sensitive, high-explosive military munitions. A high-hazard impact area is normally delineated within a dedicated impact area where access is restricted due to unexploded explosive ordnance safety hazards.

Impact Area and Non-Dudded: An impact area with designated boundaries used to contain non-explosive military munitions. These areas are primarily composed of small arms range safety fans and are available for maneuver when not used for military munitions training.

Impact Area and Temporarily-Dudded: An impact area primarily used to contain non-explosive military munitions that may be temporarily used to contain non-sensitive, high-explosive, military munitions. A temporarily-dudded impact area should be capable of being cleared for maneuver.

Laser: A device emitting a focused beam of light.

Landing Zone: A pre-designated, numbered or named helicopter landing zone, which provides major commands ready access to air transportation and MEDEVAC.

Live-fire Range: A range on which live-fire exercises, including the use of some types of practice ammunition, may be conducted.

Malfunction: Failure of munition to function in accordance with design, intent, or expected performance.

Maneuver Area: Two or more contiguous training areas designated and scheduled by a using unit for tactical exercises of battalion level or higher.

Misfire: A failure of a primer, initiation charge or propelling charge to function; a demolition charge fails to function; or a small arms primer fails.

Net Explosive Weight: The actual weight of explosive mixture of compound in pounds, including the TNT equivalent of other energetic material, which is used in the determination of explosive limits and Explosive Safety Quantity Distance arcs.

No Fire Area: A designated area into which neither live-fires nor effects of live-fire will occur. No Fire Areas are designated by a six-digit grid with a radius in meters.

No Show: A scheduled range event where the range time was not cancelled and went unused.

Notice To Airmen: A message to aircraft pilots in a specific area warning of airspace restrictions, equipment outages, or other factors which may affect flight activities.

Observation Post: A point from which impacting ordnance may be observed.

Officer-In-Charge: An individual designated by the CO of the training unit who assumes responsibility for all aspects of training to include, but not limited to live-fire, paradrops, or air exercises.

Paradrop: The controlled aerial delivery of personnel or equipment by parachute.

Pyrotechnics: Smoke or signals, either flares or grenades. White phosphorous is not considered a pyrotechnic.

Range: A training facility designated for non-live-fire or live-fire weapons training, practice firing of weapons, demolitions, flame weapons, or fire and maneuver exercises.

Range Guard: An individual designated to maintain surveillance over an assigned locale to prohibit unauthorized entry into a surface danger area, and to give the alarm in the event that entry is detected.

Range Safety Officer: An individual designated by the CO of the training unit who assumes responsibility for all aspects of safety for the training event.

Restricted Airspace/Area: Airspace designated under Federal Aviation Regulations, Part 73, within which the flight of non-participating aircraft, while not wholly prohibited is subject to restriction.

Special Use Airspace: Airspace in which aviation activities must be confined because of their nature and where limitations may be imposed on aircraft operations that are not a part of those activities. Types of special use airspace include Restricted Areas, Controlled Firing Areas, Military Operations Areas, and Warning Areas.

Standard Altitudes: Regularly scheduled effective altitudes pertaining to Special Use Airspace that are not necessarily the published effective altitudes.

Surface Danger Zone: The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris and components resulting from the firing, launching or detonation of weapons systems to include explosives and demolitions.

Training Area: All areas on MCBH outside of cantonment area boundaries.

TERF Route: Terrain flight route used for helicopter low altitude navigation training.

Visual Flight Rules: Aircraft operations conducted under visual meteorological conditions.

APPENDIX B

OIC/RSO DESIGNATION LETTER

UNITED STATES MARINE CORPS

Unit Header



IN REPLY REFER TO:
3570
S-3
DD MMM YY

From: Commanding Officer, Unit Name
 To: Range and Training Area Manager, S-3/5, Marine Corps Base Hawaii
 Subj: OFFICER-IN-CHARGE (OIC)/RANGE SAFETY OFFICER (RSO) CERTIFICATION LETTER
 Ref: (a) AR 385-63(MCO 3570.1C), 19 Jun 2003
 (b) MCBHO 1500.9C
 (c) USAG-HI Reg 210-6

1. The following Officers, Staff Noncommissioned Officers, and Noncommissioned Officers have been trained in accordance with the references and are certified as OICs and/or RSOs as indicated:

RANK	NAME	MOS	MCBH ID #	MCBH EXPIRE	MARINE NET CERT EXPIRE DATE	QUALIFICATIONS				
						BASIC	MORT	DEMO	LASER	OTHER (SPECIFY)
										CBRNE
										HRST/TRST
										DEMO
										MCWIS
										JTAC
										ALSO
										LASERS
										PARA OPS
										WATER

2. This roster supersedes all previous editions.
3. The POC is xxxxxxxx at (808) xxx-xxx.

I. M. COMMANDER

APPENDIX C

OIC/RSO CHECKLIST

RANGE OFFICER-IN-CHARGE (OIC), AND
RANGE SAFETY OFFICER (RSO) CHECKLIST

- Ensure either the OIC or RSO is in possession of the current range SOP and Risk Management Worksheet for the range scheduled.
- Ensure the RSO is familiar with the Surface Danger Zone, left and right lateral limits and troop penetration limits for the particular range scheduled.
- Ensure two-way communication is established with Range Control prior to going "HOT", both for the handheld radio issued and tactical radios being used on the range. Hourly radio checks to Range Control are required. If communication is lost the range will go into a "CHECK-FIRE" status until communication is reestablished.
- Request to go into a "HOT" or "TRAINING" status from Range Control prior to the conduct of training.
- Ensure the required road/beach guards are posted according to the current range order for the range scheduled and conduct radio checks every 30 min to Range Control. If communication is lost, the range will go into a "CHECK-FIRE" status until communication is reestablished.
- Ensure required medical support, to include non-training corpsman, safety vehicle, backboard/stretchers with "C" collar, and unit five medical bag are physically present on the Range/Training Area prior to requesting a "HOT" or TRAINING status from Range Control.
- Ensure the OIC/RSO is completely familiar with emergency Medical/CASEVAC Procedures.
- Ensure all ammunition malfunctions and accidents are reported to Range Control.
- Ensure OIC/RSO is familiar with weapon systems being used on the range.
- Verify all weapons are cleared and on safe prior to removal from range.
- Ensure a shakedown of all personnel and equipment is conducted at the conclusion of firing.
- Ensure a proper police call is conducted on the range prior to the post-training inspection. The unit will not depart the area until cleared by the RSI.
- Ensure the four weapon safety rules are understood and not violated.
- Ensure the four weapon conditions are covered for the weapon systems, as applicable.

- Request to go into a "COLD" status from Range Control at the conclusion of training.
- The OIC to ensure that all expended ammunition, dunnage, empty containers, packing materials are inspected, separated and certified free of hazardous material prior to departing the range or training area. MCO 8020.10
- The OIC to ensure that all unfired ammunition is repackaged and turned back into the ammunition supply point. MCO 8020.11
- While I am the OIC/RSO for this range, it will be my only duty and I must be physically present during all periods of training. I understand the left, right, and stay below limits within the range training area. Water cannons and booby birds that are impacted by intentional or negligent action will result in cancelled training and RSO/OIC revocation
- I have read and understand the MCBH Standing Operating Procedures for the Range/Training Area being utilized and will follow all special instructions verbal or written.

RSO _____
(Print Name and Rank)

RSO _____
(Signature of RSO)

OIC _____
Print Name and Rank)

OIC _____
(Signature of OIC)

Notes/Comments:

APPENDIX D

Marine Corps Training Area Bellows Drop Zone Certifications

AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ									
DZ SURVEY	1A. DZ NAME JACOB WATER DZ			1B. ZAR INDEX NO. 133		2A. COUNTRY US		2B. STATE HI	
	3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP FalconView								
4. SURVEY APPROVAL/DISAPPROVAL DATA									
4A1. DATE SURVEYED 20161102		4A2. TYPED NAME AND GRADE OF SURVEYOR SEBASTIAN F. ORTIZ, O-3, USAF			4A3. PHONE NUMBER (DSN) (315) 656-1187		4A4. UNIT 25 ASOS, WHEELER AAF, HI		
4B. DROP ZONE APPROVAL/DISAPPROVAL A = APPROVED D = DISAPPROVED	FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRC	HSSLADS	HVCDS
	DAY	A	A	D	A	D	A	D	D
	NIGHT	A	A	D	A	D	A	D	D
4C. DATE APPROVED FOR GROUND OPERATIONS 20170315		NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY JOHN J. LIEBER, O-4, USAF			PHONE NUMBER (DSN) (315) 656-1187		SIGNATURE LIEBER, JOHN J. N. JAMES. 10 23841831		
4D. DATE SAFETY OF FLIGHT REVIEW APPROVED 20170406		NAME AND GRADE OF REVIEWING OFFICER NICHOLAS A. LANKFORD, O-3, USAF			PHONE NUMBER (DSN) (315) 449-1280		SIGNATURE LANKFORD, NICHOLAS ALAN N. 1070654888		
4E. DATE OF MAJCOM APPROVAL 20170406		NAME AND GRADE OF APPROVING AUTHORITY CHARLES M. VELINO, O-6, USAF			PHONE NUMBER (DSN) (315) 449-1543		SIGNATURE VELINO, CHARLES M. S. M. 1124261631 2017.04.06 14:47:26 -10'00'		
5. COORDINATING ACTIVITIES									
A. DZ CONTROLLING AGENCY OR UNIT MCB Kaneohe Bay, HI				B. MEMORANDUM OF UNDERSTANDING/LAND USE YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> ATTACHED <input type="checkbox"/>			C. PHONE NUMBER (DSN) C (808) 257-8816		
D. RANGE CONTROL MCB Kaneohe Bay, HI, Range Scheduling						E. PHONE NUMBER (DSN) C (808) 257-8816			
6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)									
A. LENGTH 2200 yds		B. WIDTH 1300 yds			C. RADIUS N/A				
POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE			D. CDS PI 350 yds		E. PE PI 350 yds		F. HE PI N/A		
7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)									
A. MAGNETIC 157		B. GRID (MGRS) 166.5			C. TRUE 166.5		D. SOURCE/DATE OF VARIATION DATA WMM/20161104		
8. GROUND POINT ELEVATION		A. CDS PI N/A		B. HE PI N/A		C. PE PI SL		D. HIGHEST SL	
9. DZ COORDINATES									
A. SPHEROID WGS 84		B. DATUM WGS 84		C. GRID ZONE 04Q FJ		D. EASTING 3		E. NORTHING 63	
F. GPS DERIVED COORDINATES YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			G. POINT OF ORIGIN N/A						
H. POINT	MGRS COORDINATES			WGS84 LATITUDE (D-M.MM)			WGS84 LONGITUDE (D-M.MM)		
DZ CENTERPOINT	04Q FJ 36776 62841			N 21 21.750 (N 21 21 45.00)			W 157 40.849 (N 157 40 50.95)		
CDS PI	04Q FJ 36615 63508			N 21 22.112 (N 21 22 06.72)			W 157 40.939 (N 157 40 56.34)		
PE PI	04Q FJ 36615 63508			N 21 22.112 (N 21 22 06.72)			W 157 40.939 (N 157 40 56.34)		
HE PI	N/A			N/A			N/A		
I. DZ CORNERS MGRS COORDINATES									
LEFT LEADING EDGE 04Q FJ 37118 63958 (N 21 22 21.24 W 157 40 38.76)					RIGHT LEADING EDGE 04Q FJ 35962 63679 (N 21 22 12.48 W 157 41 18.96)				
LEFT TRAILING EDGE 04Q FJ 37591 62003 (N 21 21 17.52 W 157 40 22.92)					RIGHT TRAILING EDGE 04Q FJ 36435 61724 (N 21 21 08.76 W 157 41 03.12)				

AF IMT 3823, 20021001, V2

PREVIOUS EDITIONS ARE OBSOLETE.

DZ NAME Jacob Water DZ #133	
10. DZ DIAGRAM <p style="text-align: center;">SEE ATTACHED DIAGRAM(S)</p>	
11. REMARKS <ol style="list-style-type: none"> 1. Supported unit's commander accepts responsibility for damage to equipment, property, and/or injury to personnel on and around the DZ. 2. Coordinates, elevation derived from Garmin GPSMAP 76CSx GPS. <ol style="list-style-type: none"> a. Horizontal margin of error +/- 5 meters, Vertical margin of error 1.5 x horizontal error. b. MAGVAR = 09° 29' East Changing by 0' 2' West per year / Derived from WMM 2015 as of surveyed date. 3. Administration / Coordination / Planning / Scheduling Instructions: <ol style="list-style-type: none"> a. Contact MCBH Range and Training Scheduler, HQ G-3, Mr. Mark Robinson, Contractor, USMC, at DSN 315-257-8816/17/29. Additional contact info: cell 808-489-7454 or email mark.d.robinson1.ctr@usmc.mil b. Weekend use requires extensive coordination. Contact MCBH G-3 at DSN 315-257-8816/17/29 c. Aircrew will coordinate with user for air-ground DZ frequencies. d. User will coordinate DZ frequencies with Range Control. 4. Obstacles/Hazards on and around the DZ (User is responsible for confirming ALL obstacle/hazard locations prior to conducting airdrop operations): <ol style="list-style-type: none"> a. Airdrop Operations will be cancelled if whales are sighted in proximity of DZ; whale season is Oct - May b. DZ must be clear of all private watercraft c. Water depth ranges from 13'-133' d. Users must refer to their appropriate branch of service regulations regarding jumper personal flotation devices, safety boats, and medical requirements. e. User should provide water current speed measuring equipment. If equipment is not available and oceanographic/tidal charts depict currents in excess of 2 knots, a waiver is required prior to drop IAW AFI 13-217. 5. Rapidly Rising Terrain (RRT) – 10 NM radius – all distances from the DZ Center point: <ol style="list-style-type: none"> a. 2882' – 3150' MSL Terrain is located 2.8 – 10 NM bearing 186° - 282° Mag. 6. Antennas, Towers or Aerial Cables within 10 NM Radius of the DZ Center point: <ol style="list-style-type: none"> a. 2090 MSL (564 AGL) ft. tower 292°M, 9.6 NM b. 597 MSL (268 AGL) ft. tower 295°M, 8.9 NM c. 1250 – 1686 MSL (203 - 518 AGL) ft. towers 282°M, 7.8 NM d. 1119 MSL (220 AGL) ft. tower 280°M, 7.5 NM e. 207 - 1217 MSL (203 - 322 AGL) ft. towers 258°M - 232°M , 9.9 NM f. 295 – 328 MSL (249 - 279 AGL) ft. towers 230°M, 7.7 NM g. 240 MSL (233 AGL) ft. tower 205°M, 4.9 NM 7. Additional Information and Airspace: <ol style="list-style-type: none"> a. Avoid overflight of bird refuges on Mokulua Island and Manana Island by 2,000 ft. (N 21 23 30.22 W 157 41 55.91, N 21 23 15.43 W 157 41 51.35) b. A-311 is located 12.2 NM to the North and West. Unless scheduled, remain clear. c. PHNL Class B is located 3.1 NM to the south. d. PHNG is located 307°M, 7.2 NM e. PHIK is located 249°M, 13.9 NM f. PHHI is located 279°M, 21.2 NM g. PHJR is located 252°M, 22.1 NM 	
12. PHOTOGRAPH AVAILABLE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	13. LOW LEVEL ROUTES <input checked="" type="checkbox"/> NONE AVAILABLE <input type="checkbox"/> ROUTE NAME/DESIGNATOR

AF IMT 3823, 20021001, V2 (REVERSE)



Marine Corps Training Area Bellows Drop Zone Jacob Water

AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ										
DROP ZONE SURVEY	1A. DZ NAME TIGER SHARK CIRCULAR DZ				1B. ZAR INDEX NO.		2A. COUNTRY US		2B. STATE HI	
	3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP WGS84 CIB 5M 20050601									
4. SURVEY APPROVAL/DISAPPROVAL DATA										
4A1. DATE SURVEYED 20141027		4A2. TYPED NAME AND GRADE OF SURVEYOR KYLE WELLS, CAPT, USAF			4A3. PHONE NUMBER (DSM) 359-9533		4A4. UNIT 129 OSS/OSK, MOFFETT FAF, CA			
4B. DROP ZONE APPROVAL/DISAPPROVAL A = APPROVED D = DISAPPROVED	FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRR	HSLLDAS	HVCDS	
	DAY	D	A	D	A	A	D	D	D	
	NIGHT	D	A	D	A	A	D	D	D	
4C. DATE APPROVED FOR GROUND OPERATIONS 20141101	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY TRISTAN GRELL, CAPT, USAF				PHONE NUMBER (DSM) 359-9070		SIGNATURE GRELL, TRIS			
	UNIT AND LOCATION 131 RQS/DOJ, MOFFETT FAF, CA						TAN, JOHN. 11 73103235 <small>Digitally signed by GRELL, TRISTAN JOHN 1173103235 DN: cn=US, o=U.S. Government, ou=D-DC, ou=FA, ou=USAF, email=GRELL,TRIS.TAN@USAF. gov Date: 2014.11.01 12:27:42 -0700</small>			
4D. DATE SAFETY OF FLIGHT REVIEW APPROVED 20141101	NAME AND GRADE OF REVIEWING OFFICER BRANDON MOORE, MAJ, USAF				PHONE NUMBER (DSM) 359-9531		SIGNATURE MOORE, BRAN			
	UNIT AND LOCATION 129 OSS/OSK, MOFFETT FAF, CA						NDON, KAWIK A.1264957539 <small>Digitally signed by MOORE, BRANDON KAWIK 129467 DN: cn=US, o=U.S. Government, ou=D-DC, ou=FA, ou=USAF, email=MOORE, BRANDON KAWIK 1294 67539 Date: 2014.11.01 15:17:28 -0700</small>			
4E. DATE OF MAJCOM APPROVAL 20141101	NAME AND GRADE OF APPROVING AUTHORITY TAFT AUJERO, LT COL, USAF				PHONE NUMBER (DSM) 359-9316		SIGNATURE			
	UNIT AND LOCATION 129 OG/CC, MOFFETT FAF, CA						Digitally signed by AUJERO, TAFT OWEN 1189198946 DN: cn=US, o=U.S. Government, ou=D-DC, ou=FA, ou=USAF, ou=USAF, cn=AUJERO, TAFT, OWEN 1189198946 Date: 2014.11.01 15:47:14 -0700			
5. COORDINATING ACTIVITIES										
A. DZ CONTROLLING AGENCY OR UNIT MCB Kaneohe Bay, HI				B. MEMORANDUM OF UNDERSTANDING/LAND USE YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> ATTACHED <input type="checkbox"/>			C. PHONE NUMBER (DSM) (C) 808-257-8816			
D. RANGE CONTROL MCB Kaneohe Bay, HI, Range Scheduling						E. PHONE NUMBER (DSM) (C) 808-257-8816				
6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)										
A. LENGTH N/A			B. WIDTH N/A			C. RADIUS 822 YDS				
POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE			D. CDS PI N/A		E. PE PI N/A		F. HE PI N/A			
7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)										
A. MAGNETIC N/A			B. GRID (MGRS) N/A			C. TRUE N/A		D. SOURCE/DATE OF VARIATION DATA 20141027		
8. GROUND POINT ELEVATION		A. CDS PI N/A		B. HE PI N/A		C. PE PI 13'		D. HIGHEST 16'		
9. DZ COORDINATES										
A. SPHEROID WGS84		B. DATUM WGS84		C. GRID ZONE 04Q		D. EASTING 6		E. NORTHING 23		
F. GPS DERIVED COORDINATES YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			G. POINT OF ORIGIN 04Q FJ 33247 61857							
H. POINT		MGRS COORDINATES			WGS84 LATITUDE (D-M.MM)			WGS84 LONGITUDE (D-M.MM)		
DZ CENTERPOINT		04Q FJ 33293 61858			N 21 21.233'			W 157 42.869'		
CDS PI		N/A			N/A			N/A		
PE PI		04Q FJ 33293 61858			N 21 21.233'			W 157 42.869'		
HE PI		N/A			N/A			N/A		
I. DZ CORNERS MGRS COORDINATES										
LEFT LEADING EDGE N/A					RIGHT LEADING EDGE N/A					
LEFT TRAILING EDGE N/A					RIGHT TRAILING EDGE N/A					

DZ NAME TIGER SHARK CIRCULAR DZ	
10. DZ DIAGRAM	
11. REMARKS	
<ol style="list-style-type: none"> 1. Supported unit commander accepts responsibility for damage to equipment, property, and/or injury to personnel. 2. Coordinates, elevation data derived from FFFS/FalconView. 3. Contact MCBH Kaneohe Range Control for access: 808-257-8816/3180 4. Obstacles/Hazards on and around the DZ – All distances from DZ Centerpoint unless otherwise specified: <ol style="list-style-type: none"> a. Building: 034° @ 242 yds. b. Normal hazards associated with an abandoned airfield are present. c. Power lines are present within 1000m of the DZ boundary, see diagram for reference. 5. Rapidly Rising Terrain (10 NM radius) – all distances from the DZ Centerpoint: <ol style="list-style-type: none"> a. 2997' MSL Mountain range and ridge line is located within 2 NM, SE to SW of DZ with associated power lines on ridge. b. 1643' MSL Hill located 1.8 NM W @ 269° MC. c. 3150' MSL Mountain ridge line located 3.8 NM W @ 266° MC. 6. Antennas, Towers or Aerial Cables within 10 NM Radius of the DZ Centerpoint (bearing/range): <ol style="list-style-type: none"> a. Power lines on ridge (see 5a above). 7. Additional Information and Airspace: <ol style="list-style-type: none"> a. Kaneohe MCAS Class D airspace (SFC-2500' MSL) located 2 NM NE @ 324° MC. b. Honolulu Class B airspace (4000' AGL - 9000' MSL) located 2 NM S @ 166° MC. c. Heavy civilian air traffic along Hwy 72 corridor immediately S & W of DZ. 8. Notes: <ol style="list-style-type: none"> a. Random Run-ins approved for MFF operations unless otherwise dictated by ATC. b. *Quiet hours apply to the town of Waimanalo: No excessive noise between the hours: 2200 - 0700 normally, and 2200 - 0900 on city, state, and federal holidays. c. VIRS and GMRS authorized. d. For helicopter staticline operations, units must follow FM 3-21.38, Chap 6. 	
12. PHOTOGRAPH AVAILABLE	LOW LEVEL ROUTES
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE AVAILABLE
	<input type="checkbox"/> ROUTE NAME/DESIGNATOR

AF IMT 3823, 20021001, V2 (REVERSE)

Marine Corps Training Area Bellows Drop Zone Tiger Shark

APPENDIX E

MCBH STANDARD RM WORKSHEET/RISK ASSESSMENT FORM

Units requesting the use of High Explosives, Fire and Maneuver, or Shoot House training must submit a RM worksheet to the installation RCO located in the MCBH, S-3 wing of Building 216. Service specific RM formats are acceptable.

RISK MANAGEMENT MATRIX MCBH										
TRAINING EVOLUTION:		ORGANIZATION:		PREPARED BY:		DATE:				
OPERATIONAL PHASE	HAZARD	CAUSES	INITIAL RAC	DEVELOP CONTROLS	RESIDUAL RAC	HOW TO IMPLEMENT	HOW TO SUPERVISE			
HAZARD SEVERITY: I-CATASTROPHIC-Death, permanent disability, major property damage. II-CRITICAL-Permanent partial disability, major system damage, minor property damage. III MARGINAL-Minor injury, minor system or property damage. IV-NEGLIGIBLE-1st aid, minor system repair. MISHAP PROBABILITY: A-FREQUENT B-LIKELY C-OCCASIONAL D-UNLIKELY RISK ASSESSMENT CODE (RAC): 1-CRITICAL 2-SERIOUS 3-MODERATE 4-MINOR 5-NEGLIGIBLE			RAC ASSESSMENT CODE MATRIX				COMMAND REVIEW / APPROVAL			
			H A Z A R D S E V E R I T Y	MISHAP PROBABILITY						
					A	B			C	D
				I	1	1			2	3
				II	1	2			3	4
III	2	3	4	5						
IV	3	4	5	5						

APPENDIX F
INJURY REPORT

1. INJURED PERSON (LAST NAME, FIRST, MI)		2. EDIPI	
3. AGE	4. SEX	5. RANK	6. MOS
7. TRAINING UNIT/SECTION (CIRCLE ONE)			
UNIT		POC	
8. CIRCLE ONE (OR MORE IF APPLICABLE)			
FATALITY INJURY PERMANENT PARTIAL PROPERTY DISABILITY DAMAGE			
9. DATE OF INJURY	10. TIME OF INJURY	11. TRAINING AREA (BE SPECIFIC)	
12. TRAINING EVOLUTION BEING CONDUCTED WHEN INJURY OCCURRED			
13. DESCRIPTION OF MISHAP (DESCRIBE CIRCUMSTANCES AND EVENTS LEADING UP TO AND ASSOCIATED WITH THE MISHAP IN SUFFICIENT DETAIL THAT REVIEWING AUTHORITIES MAY GAIN A COMPLETE UNDERSTANDING OF CAUSE.)			
14. WEATHER CONDITIONS	15. DESCRIBE EXTENT OF INJURY	16. LIST INSTRUCTORS INVOLVED	
17. SIGNATURE	18. TITLE	19. DATE	

APPENDIX G

AUTHORIZED AMMUNITION

AUTHORIZED AMMUNITION	R1	R2	R3	R5	R6	R7	R8	R8A	R8B	R9	R9A	R10	R11	A	B	C	D	E	F	MOU	MOU	TA2	TA3
BLANKS W/BFAs	X		X	X		X		X	X											X	X	X	X
DEMOLITIONS			X				X																
7.62MM Linked	X			X		X						X											
7.62 SPECIAL BALL	X			X		X				X		X		X	X								
5.56MM Linked	X		X	X				X	X	*		X		*									
5.56MM M4/M16/M27	X		X	X	X	X		X	X	X		X		X	X	X	X	X	X				
12 GAUGE	X	X	X	X	X	X		X	X	X						X	X	X	X				
9MM PISTOL/SMG	X	X	X	X	X	X		X	X	X						X	X	X	X				
45 CAL. PISTOL/SMG	X	X	X	X	X	X		X	X	X						X	X	X	X				
SESAMs			X						X											X	X	X	X
60MM (MAX CHARGE 1)											X												
.50CAL.	X			X		X						X											
40MM				X		X							X										
APOBS				X			X																
FRAG GRENADES	X			X				X					X										
IED SIMS																				X	X	X	X
AT-/ SMAW LAAW / MAAWS				X		X																	
SMOKE GRENADES			X	X					X											X	X	X	X
SRTA	X		X		X		X	X	X														
UTM / SESAM / CCMCK			X																	X	X	X	X

* SINGLE SHOT MODE ONLY. SMOKE GRENADES WILL ONLY BE USED ON R-3 OUTSIDE

APPENDIX H

FIRE REPORT/COMMUNICATION SHEET

FIRE REPORT/COMMUNICATIONS SHEET (See daily range bulletin)

INCIDENT NUMBER (YY-0000)		
DATE (YYYYMMDD)	FIRE LOCATION	RANGE OCCUPIED BY UNIT
TIME FIRE REPORTED		TIME FIRE OUT

NOTIFICATION BY RANGE OFFICER/SNCO (URC Channel C5)

AGENCY NOTIFICATION	PHONE	TIME CALLED	AT SCENE	REMARKS
FED FIRE/MPD	911		Reports to CP	
CDO/EOC	(808) 257-8456/ 8457/8819/7700			
S-3 Directorate	(808) 257-8884		CP S-3 Rep	

NOTIFICATION BY FEDERAL FIRE (FED FIRE) DEPARTMENT

AGENCY NOTIFICATION	PHONE	TIME CALLED	AT SCENE	REMARKS
MPD	(808) 257-7114		Reports to CP	Additional firefighting assets
ARFF	(808) 257-3212		Support Fed Fire	
EOD	(808) 630- 8310/257- 7112/DUTY 216- 6215		To ensure no one goes into the impact area	
MAG-24	(808) 257-3139/ 2285/1416		Freq 379.25	Request fire buckets

NOTIFICATION BY COMMAND DUTY OR BASE EMERGENCY OPERATIONS CENTER

AGENCY NOTIFICATION	PHONE	TIME CALLED	AT SCENE	REMARKS
S-3 OPS	(808) 257-8467 (W) (808) 261-7271 (H) (808) 479-7300 (C)		Reports to EOC	
MAG-24	(808) 257-3139 (808) 257-2285 (808) 257-1416 (w)			Follow-up to Fed Fire's request
Base Safety Fire Specialist	(808) 257-1830 (w) (808) 561-3004 (c) (808) 216-5206 (c)		Reports to CP	
Base Environmental	(808) 257-6920 (w) (808) 216-5178 (c)		Reports to CP	
ARFF	(808) 257-3212 (duty)		Reports to IC	Follow-up to Fed Fire's request
Chief of Staff	(808) 257-7772 (808) 620-2161			Ask COS if he's going to contact Deputy, etc.

FREQUENCIES/CHANNELS

Frequency approved for on base air to ground emergency operations.	Range personnel should be on URC Channel C5	379.25
Frequencies approved for various air to ground use if needed outside of MCBH.		342.6 349.9

FIRE DESCRIPTION

High Medium Low	Estimated Acres Burned	Fire started in Impact Area? Fire escaped Firebreak?
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HELICOPTER SUPPORT

Support Needed?	Aircraft Call Sign	Time Arrived on Scene	Time Departed	Number of Fire Bucket Drops?
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FIRE CAUSE

Narrative		
Ammo Type	Weapon System	
Training unit	POC	Telephone
Remarks		
Fire report completed by	Date	Reviewed By

APPENDIX I

MCBH KANEOHE BAY SUPPORT FOR VISITING UNITS

1. MCBH Kaneohe Bay is located on the Mokapu Peninsula on the eastern side of the island of Oahu. Housed at Kaneohe Bay, you will find a broad-based support structure that can accommodate any training need. Figure I-1 shows the layout of MCBH Kaneohe Bay.

2. To make liaison with the different commands, the following information is provided:

a. 3d Marine Regiment is the higher headquarters to three infantry battalions and a combat assault company. The regimental staff can be reached by calling (808) 257-0700.

b. School of Infantry West Detachment Hawaii maintains a staff of Marines who can instruct units in squad leader and martial arts operations. The school can be reached at (808) 257-1339.

c. Marine Aircraft Group 24 is the higher headquarters to one HMLA, one HMM, two VMM, and one VMU squadron and a logistics support element. For all air requests or requirements call (808) 257-3139.

d. 3d Radio Battalion (RadBn) is the primary signals intelligence Marine unit in the Hawaiian Islands. To request support from 3rd RadBn, call (808) 257-7511.

e. Combat Logistics Battalion-3 (CLB-3) can offer a wide range of support from landing support, motor transport, maintenance and repair, and engineers. CLB-3 can be reached at (808) 257-0469.

f. 1st Battalion, 12th Marines (1/12) is the home of three artillery batteries and a headquarters battery. To request support from 1/12, please call their S-3 at (808) 257-8010.

g. 4th Force Reconnaissance Company can be reached at (808) 257-2531.

3. In addition to military training supported by tenant commands, units can also receive mission essential support through these support agencies:

a. Medical: Branch Medical Clinic at Kaneohe Bay can provide a wide range of medical support. Twenty-four (24) hour ambulance support is provided by Honolulu Fire Department (808) 257-3133. For more information call (808) 257-2131.

b. Dental: 21st Dental Company can provide a wide variety of dental support. 21st Dental can be reached at (808) 257-3100.

c. American Red Cross: In the event of an emergency while utilizing MCBH for an extended period of time, the American Red Cross can provide assistance. To contact the Red Cross office, call (808) 257-3150.

d. Navy/Marine: Corps Relief Society (NMCRS) In the event a service member has an emergency situation while aboard MCBH, in which financial

support is required, the NMCRS can be of assistance. The NMCRS can be reached at (808) 257-1327.

e. The Lodge at Kaneohe Bay is the primary lodging facility for visitors to MCBH on official business. The Lodge also manages the Cottages along the western shore. For temporary lodging call (808) 257-2806.

f. MCBH Base Chapel: Religious services aboard MCBH are conducted at the Base Chapel. For more information call (808) 257-3552.

g. Tripler Army Medical Center (TAMC): The primary hospital for military members and their families on the island of Oahu, TAMC is a fully functional hospital that can support any medical need. For more information regarding the support capabilities of TAMC, call (808) 433-6661/6662/6663 or visit their Web site at www.tamc.amedd.army.mil.

h. Physical Therapy Sports Medicine and Rehabilitation Team (SMART) Center: MCBH's sports medicine center has two full-time physicians to assist with medical rehabilitation. The SMART center is located in Building 221, and can be reached by calling (808) 257-8708.

i. Anderson Dining Facility: The dining facility offers food service support to the Marines and Sailors of MCBH. The facility has morning, noon, and evening meal hours. The dining facility also supports all requests for units who desire field or range chow. The dining facility can be reached at (808) 257-2832/1004.

j. Legal Assistance: The Legal Services Support Team and the Staff Judge Advocate Office provide Marines and Sailors, as well as spouses, with legal assistance. They are located in Building 215, across from the Base Commander's Building on the opposite side of the Base Flag Pole, and can be reached at (808) 257-7801.

k. Post Office: The post office provides the base with an on-base site for the distribution of mail. The hours of operation are Monday through Friday from 0800-1630 and Saturday from 0800-1200. The Post Office is located on Mokapu Boulevard, adjacent to the Base Chapel, and can be reached at (808) 257-2008.

l. The Military Police Department (MPD): The MPD is responsible for all matters relating to installation security and law enforcement on-base. Departments include a K-9 Unit, Criminal Investigation Department, as well as others. MPD will be the POC for vehicle passes/decals. MPD can be contacted at (808) 257-2123.

m. Hawaii Installation Personnel Administration Center (IPAC): IPAC can assist with any and all personnel administrative issues. Sections include inbound, outbound, operations, pay and leave. The IPAC can be reached at (808) 257-1469.

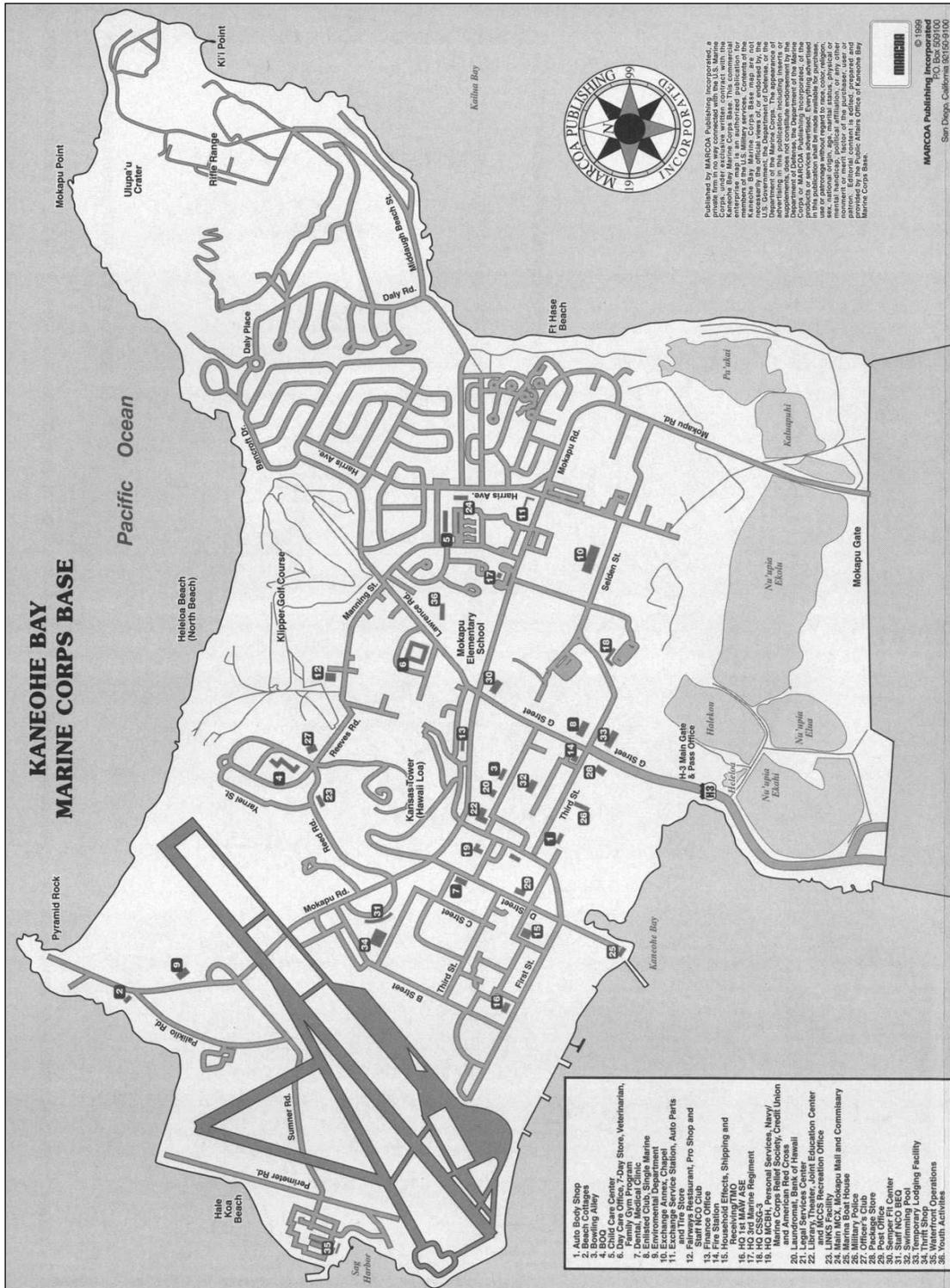


Figure I-1 Layout of Kaneohe Bay

APPENDIX J

INDEMNITY AND HOLD HARMLESS AGREEMENT

In consideration of my being able to participate in Training being conducted on Marine Corps Base Hawaii, Kaneohe Bay, Hawaii, on _____ 20____, at _____ Range Training Area (RTA), the undersigned agrees to the following:

1. That I acknowledge and fully understand that I will be engaging in training on the _____. These activities are known to be inherently dangerous and involve substantial risk of serious injury, including permanent disability, death, and while particular protective equipment and personal discipline will minimize this risk, the risk of serious injury or death does exist. These ranges/training areas may contain hidden manmade or natural obstacles which could similarly result in my injury or death. RTA conditions are often aggravated by the weather where exposure to heat, humidity, cold, wind, or wetness can increase the likelihood of sickness, injury or death. The event in which I am about to participate may include military personnel and equipment, to include the use of weapons, both ground and air based, and where such personnel and equipment are in use the likelihood of accident, injury, or death is greatly increased. I also understand that such injury may result from not only my action or inaction but also the actions or inactions of others, or the conditions of the training facilities. I knowingly and freely assume all such risks, both known and unknown, even if arising from the negligence of those persons released from liability below, and assume full responsibility for my participation. Prior to participating in any training on the _____, if I believe that anything is unsafe, I will advise range officials, in particular the Range Safety Officer, of such conditions and refuse to participate. I fully and voluntarily accept all risks associated, so that I may engage in this training activity. I understand that by accepting such opportunity, I incur no obligation towards the United States Government except as imposed by this release. I understand that the United States Government is not acting as a training facilitator for hire and does not bear the liabilities attaching to that status.

Releaser's Initials or Parent/Legal Guardian

2. I hereby release and hold harmless, waive, discharge, and covenant not to sue, the United States Government, including all of its subdivisions, officers, military personnel, employees and agents (hereinafter called the RELEASEE) WITH RESPECT TO ANY AND ALL INJURY, DISABILITY, DEATH, or loss or damage to person or property, WHETHER CAUSED BY THE NEGLIGENCE OF THE RELEASEES OR OTHERWISE, except that which is the result of gross negligence and/or wanton misconduct. I hereby release the United States Government from all liability for any injury including death or permanent disability, to me, caused or alleged to have been caused, in whole or in part by the negligence of the RELEASEE or otherwise caused, or resulting from, or in connection with training on _____. I have had a full and fair opportunity to consult an attorney about this agreement, and understand that such consultation is prudent and make this agreement voluntarily.

Releaser's Initials or Parent/Legal Guardian

3. I agree that this release not only binds myself, but also my family, heirs, assigns, administrators, and executors. Accordingly, I indemnify and hold harmless the RELEASEE from all liability and responsibility of any sort for all damage, injury, death, and loss to all persons incident to my injuries sustained during this training on the _____.

Releaser's Initials or Parent/Legal Guardian

4. Should I sustain any injury while participating in or observing this Training on the _____, I hereby authorize any emergency first aid, medication, medical treatment or surgery deemed necessary by licensed medical personnel.

Releaser's Initials or Parent/Legal Guardian

5. I have considered purchasing insurance for this activity. I understand and agree that neither the United States, the United States Marine Corps, nor any of their partners, agents, employees, or agencies will insure me.

Releaser's Initials or Parent/Legal Guardian

Parent/Legal Guardian Signature Print Date

Range Control Officer Signature Print Date

APPENDIX K



WAIVER REQUEST FORMAT
UNITED STATES MARINE CORPS
Unit Header

IN REPLY REFER TO:
3570
S-3
DD MMM YY

From: Activity Head
To: Commanding Officer, Marine Corps Base Hawaii
Via: Installation Range Control Officer, S-3, Marine Corps Base Hawaii

Subj: REQUEST FOR WAIVER TO RANGE AND TRAINING AREA REGULATIONS

1. Name and address of activity.
2. Purpose of request (Specific statement of intent).
3. Specific time and/or time frame of action.
4. Specific location, grid coordinate or zone of action.
5. Plan of Execution.
6. Detail action.
7. Resources involved, special equipment capabilities.
8. Precautions to ensure safety and compliance with legal restrictions.
9. Precautions to minimize impact to environment.
10. References of precedence with similar previous actions (as available/appropriate).
11. Alternative courses of action considered.
12. Significance of the action and anticipated result if action is not approved as requested.
13. Suspense date for coordination.
14. POC name, telephone, e-mail.

SIGNATURE

APPENDIX L

FORM SRF-1 HAZARDOUS SUBSTANCE RELEASE/SPILL REPORT

Date:	Time:	Report #:	Area:
POC:	Phone #:		Rank:
Material spilled:	Bldg #:		Unit:
Source:	Amount:		Grid:
Spill Cause:			
Areas Threatened or Damaged		Potential Dangers:	
a. Beach	<input type="checkbox"/>	a. Fire	<input type="checkbox"/>
b. Water supply	<input type="checkbox"/>	b. Toxic	<input type="checkbox"/>
c. River	<input type="checkbox"/>	c. Explosion	<input type="checkbox"/>
d. Vegetation	<input type="checkbox"/>	d. Other _____	
e. Other			
Responder	Responder Action:		
Weather Conditions:	Casualties: Y/N		
Brief Description of Spill:			
<p>Notifications:</p> <p>a. Notifications must be made to MCBH Range Control immediately.</p> <p>b. Hazardous Substance Spill/Release: Phone (808)-257-7133.</p> <p>c. Chain of Command: As directed</p> <p>Reports:</p> <p>a. Complete After Action Report.</p>			

APPENDIX M

SCHEME OF MANEUVER REQUIREMENTS

1. Description. Units requesting the use of High Explosives or live fire and maneuver (to include shoot houses) to support their training at the Kaneohe Bay Range Training Complex must submit a Graphic Scheme Of Maneuver (SOM) plan and RM to the RCO preferably 30 days prior to the event. SOM and RMs will be accepted up to 14 days prior. After 14 days the event will be canceled in RFMSS unless specific coordination has been made with the RCO or RCF Operations Staff. The RCO is located in the MCBH, S-3 wing of Building 216. Depending on the type of training, some SOMs must be accompanied by a RM Worksheet and/or a pyrotechnics request. SOMs/RM Worksheets may be submitted via e-mail or hand delivered. RM worksheets must be signed by the appropriate level of leadership for the activity planned. Failure to provide an adequate SOM/RM Worksheet may result in the training event being canceled or delayed.

2. Requirements. At a minimum, the SOM must contain:

- a. Who: Unit, number of personnel.
- b. What: Training to be accomplished.
- c. When: Date, time to start, time to end.
- d. Where: Location, range.

e. Graphic: Indicating where Support by Fire Positions, cease or shift fire lines, demo pits, composition of explosive charge, location of targets, firing points, etc.

f. Key Safety Measures Undertaken: List and describe personal protective equipment, rehearsals, communications, signals, radios, etc.

3. POC. The POC is the MCBH, S-3 RFMSS Scheduler at (808) 257-8816. (808) 257-4243, (808) 257, 2067

4. Example. The following PowerPoint slides are an example of an acceptable format. The example slides are not all inclusive. Ensure all pre-requirements are described in the SOM.

R-10 Platoon Reinforced Attacks Pohokuloa Training Area February 21-22 2003

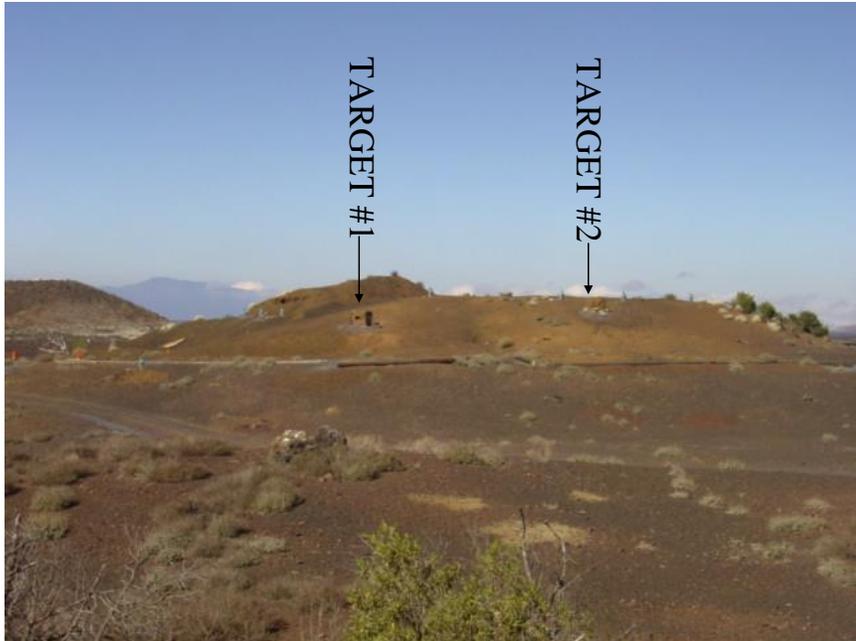
Alfa Company 1/3
OIC: Capt Tennant
RSO: Lt Zinni

Scheme of Maneuver

Movement to Company Objective 2

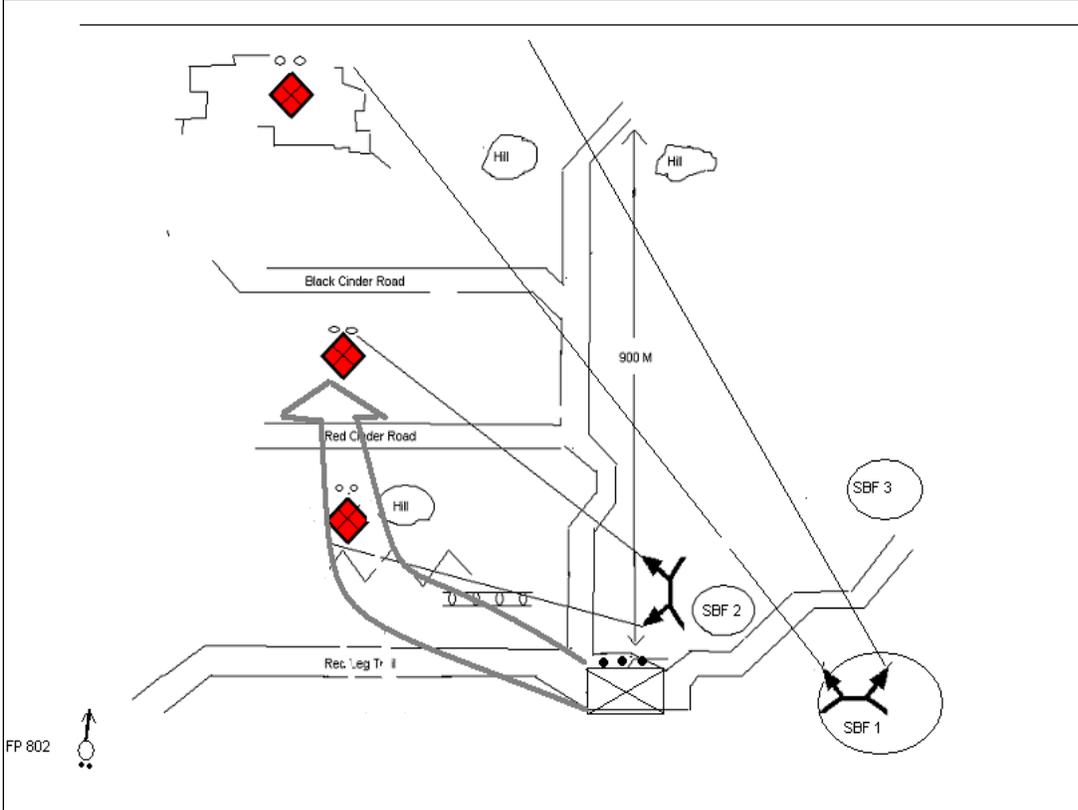
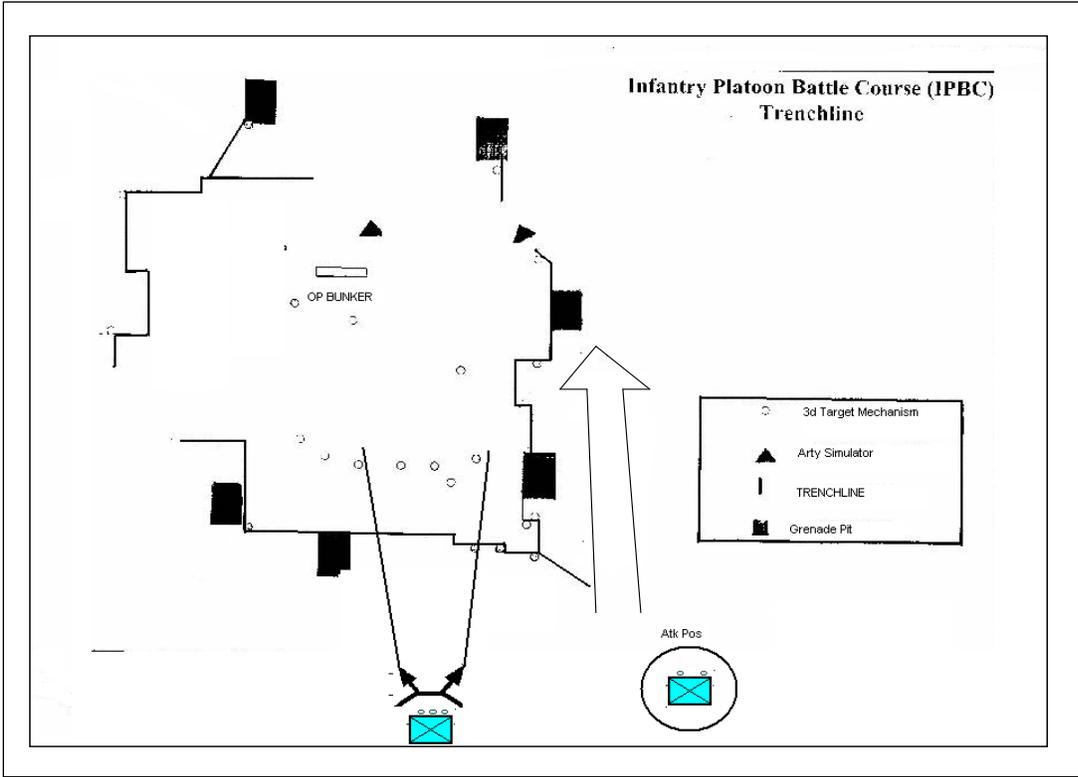
- Mortars shift to AO 1003.
- SBF #3 suppresses Company Objective 2 .
- SBF#3 ceases fire when platoon reaches Black Cinder Trail.
- Platoon moves to Assault Position.
- SMAW shots taken from berm in front of assault position.
- SBF #3 shifts fire to western half of Company Objective 2 .
- ME commences attack on Company Objective 2.

SMAW SHOT TARGETS



Scheme of Maneuver

- Clearing of Company Objective 2
 - Platoon suppresses trench line
 - Squad 1 moves to atk pos. Fire team moves to trench and throws grenade in at entry point.
 - Upon detonation of grenade, platoon shifts fire.
 - First squad enters trench and clears trench to north (right half).
 - Only one room will be cleared at a time (no multiple explosions), only point man will engage trenchline targets.



R-10 Scheme of Maneuver

- **Consolidation**
 - Upon seizure of Co Obj 1, platoon consolidates.
 - Under cover fire from platoon, Assault team engages deep hardened targets with a SMAW/AT-4.
 - The RSO and PSOs will inspect all weapons at their respective positions. Company moves to AA.

Safety

- Lead man in each squad will carry a marking device (flag).
- One bunker will be cleared at a time using four man room clearing techniques.
- Only one and two man will fire at targets in rooms
- Only lead man will fire at targets in trench.
- PSOs will supervise all movement and grenade throwing

Timeline

- 21 February
 - 0530–0700 Reveille, morning routine, chow
 - 0700-0900 Platoon Orders
 - 0900-1400 Platoon Rehearsal
 - 1400-1500 Ammo Issue
 - 1500–1730 Platoon Live Fire

Safety Plan

- All ammunition will be kept at the AHA under an armed guard.
- A safety brief will be given by the RSO prior to live fire attacks.
- Communication: the OIC will carry a PRC-119 at all times IOT maintain positive communication with range control. Internal squad radios will be the primary communication between the OIC, RSO, PSOs, Safety Vehicle, AHA, and road guards. Should a cease-fire or check-fire occur, all will be notified via squad radio.
- In the event of a casualty, Range Control will be notified immediately, followed by battalion. The OIC will decide on how to evacuate the casualty (helicopter or vehicular).
- One position safety officer (PSO) will be at SBF 1 and 2, with the maneuver elements, and with each maneuver element in the trench.
- Immediately following each live-fire, PSOs will clear all weapons and line out all shooters. SAWs and M240s will gutted and checked for hiding rounds.
- A thorough line out will be conducted prior to departing the range.

Command

- PTA R-10
 - OIC: Capt Tennant
 - RSO: 1st Lt Zinni
- FP 802
 - OIC: 2ndLt Hollopeter
 - RSO: SSGT Minor

Signal Plan

- **PRIMARY:** All commands to cease fire, shift fire, open fire and displace will be passed by the platoon commander by radio.
- **SECONDARY:** OIC, RSO, and PSO will cease fire.

APPENDIX N

UNMANNED AIRCRAFT SYSTEMS OPERATIONS

1. Description of flight operations. Unmanned Aircraft Systems (UAS) operations are required for the proficiency training of the operators and to support tactical training operations occurring during exercises supporting Marine Corps and other service pre-deployment training. UAS flight operations may be conducted anywhere, within the airspace dedicated to MCBH, after the proponent has received a Certificate of Authorization or waiver (COA) or Airspace Access Authorization (AAA). Once the COA or AAA have been approved by the FAA a letter of agreement (LOA) will be drafted and signed by the proponent, air traffic control facility officer (ATC) and the RCO. UAS flight operations require a notice to airman be published not more than 72 hours and not less than 30 minutes prior to the flights.
2. Operation Limitations.
 - a. All operations will be in accordance with current FAA issued COA or AAA that is issued for the specific UAS to be operated.
 - b. Operations will remain within the confines outlined in the approved COA or AAA request and scheduled by the using unit. Figure N-1 shows the MCAS and MCTAB UAS Operating Areas.
 - c. Prohibited operations include beyond visual line-of-sight, deliberate operations into clouds, directly overhead housing or directly over densely populated areas.
3. Method of Pilotage. Only trained and qualified operators will pilot the vehicle using pre-assigned Global Positioning System waypoints via an on-board auto-pilot that can be updated by a ground station. One pilot/operator and one observer are required for operation. The pilot/operator and observer cannot be the same person. The pilot/operator and observer qualifications, other than Marine Corps standards, are established by the FAA and delineated in the COA.
4. Coordination and Scheduling. The UAS pilot/operator or OIC of the training will contact range scheduling and request a NOTAM be submitted to the Automated Flight Service Station not more than 72 hours prior to and not less than 30 minutes prior to the operation of the UAS. Provide name and address of the using facility, location, and altitude of operating area and time and nature of activity. All UAS operations will be scheduled through the RFMSS in coordination with MCBH Range Operations. In addition, operations planned at West Field will be scheduled and coordinated with MCAS Operations.
5. Emergencies. In the event of an emergency, including the loss of communications with the UAS or an interloping aircraft, the operating unit will terminate UAS operations immediately and contact Range Control for further instructions.

6. Communications Procedures

a. Operations at MCAS. MCAS requires instantaneous two-way radio communication between the UAS operator and MCAS Air Traffic Control while UAS operations are taking place when the tower is operational. When the MCAS tower is not operational, the FAA Honolulu Control Facility (HCF) has jurisdiction. The UAS operator will notify the FAA HCF and MCAS operations no later than one hour prior to and one hour after termination of operations. The FAA HCF can be reached at (808) 840-6201. MCAS operations can be reached at (808) 257-3579, or (808) 216-3252 if after hours.

b. Operations at MCTAB. The FAA HCF has jurisdiction. UAS operator will notify Range Control, FAA HCF and MCAS operations NLT one hour prior to and one hour after termination of operations. The Range Control can be reached at (808) 257-3180, FAA HCF can be reached at (808) 840-6201. MCAS operations can be reached at (808) 257-3579, or (808) 216-3252 if after hours.

c. It is highly recommended for operations at MCTAB and MCAS (MCAS with tower closed) that a "Safety Frequency," obtained by the MCBH frequency manager in the Very High Frequency AM band, 118-135 MHz, be established and included in the D-NOTAM with a call sign to assist in any real time de-confliction with civil air traffic.

7. Pilot-In-Command (PIC). The PIC is the person directly responsible for the operation of the UAS. One PIC must be designated at all times and is responsible for the safety of the UAS and all persons and property along the UAS flight path. The PIC will be held accountable for controlling their aircraft to the same standards as the pilot of a manned aircraft.

8. Route and Altitude Procedures

a. All UAS flights will be contained within the boundaries and maximum altitudes established in the COA or AAA for that specific aircraft.

b. When operating outside of restricted areas, special provisions must be made to ensure an equivalent level of safety exists for operations had a pilot been onboard. The following provisions provide acceptable mitigation:

(1) Visual observers, either ground-based or airborne, must be used.

(2) The training unit is responsible for collision avoidance with all aircraft, other aviation operations, and the safety of persons or property on the surface.

(3) Operations must be conducted IAW all provisions of the COA or AAA.

(4) All operations must stay within the boundaries of COA or AAA.

(5) The FAA has authorized group 1 UAS to operate at MCTAB within these coordinates listed below. Each proponent must submit their own AAA request to the Western Service Area NAVREP. These coordinates are provided for information purposes only.

Latitude Longitude

Area Point 1	21°22'15''N	157°42'53''W
Area Point 2	21°21'41''N	157°43'32''W
Area Point 3	21°21'23''N	157°43'17''W
Area Point 4	21°21'0''N	157°43'18''W
Area Point 5	21°20'56''N	157°42'59''W
Area Point 6	21°21'18''N	157°40'18''W
Area Point 7	21°22'3''N	157°40'26''W
Area Point 8	21°21'51''N	157°42'36''W
Area Point 9	21°21'42''N	157°42'58''W

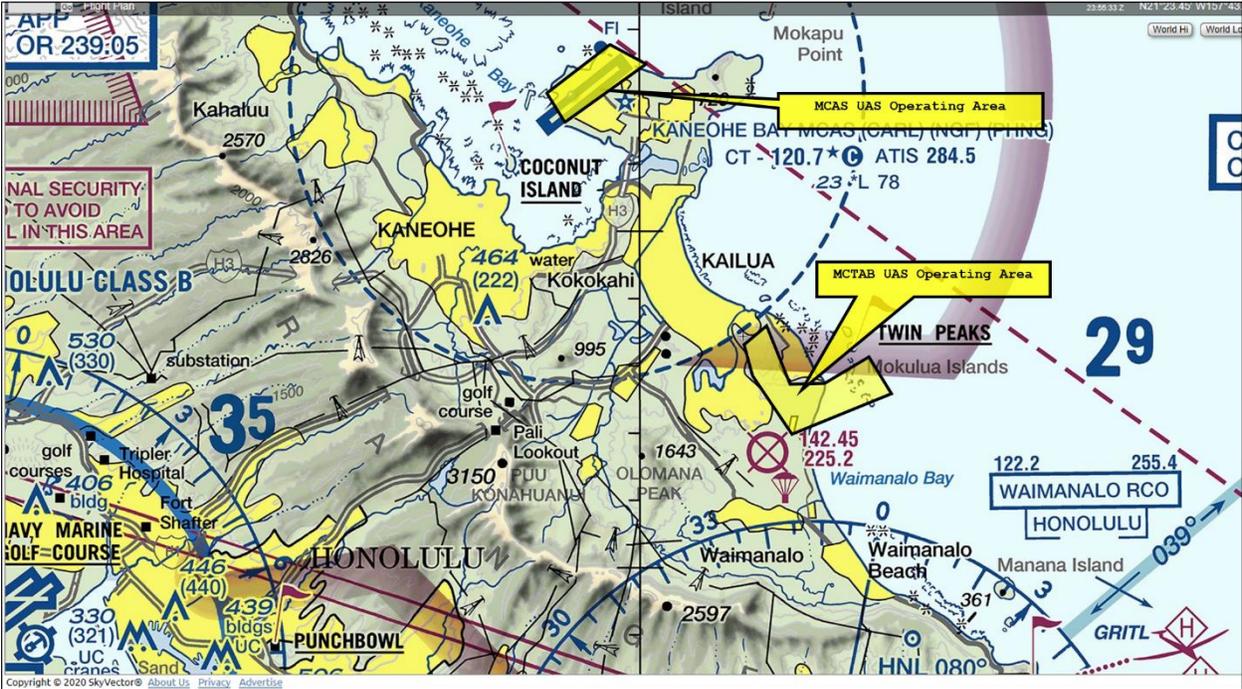


Figure N-1 MCTAB and MCAS UAS Operating Areas

APPENDIX O

MCBH PYROTECHNICS REQUEST FORM

1. Description. Units requesting the use of pyrotechnics to support their training at MCTAB, PRTA, BTA, PRTF or KBRTC, must submit a pyrotechnics use request NLT 48 hours from the start of the event to the RTAM office located in the S-3 wing of Building 216. The standard request form found in this Appendix is the only acceptable format.

2. Even though the use of pyrotechnics has been approved by the range management office or Range Control, unit commanders are advised to use their best judgement and common sense when using pyrotechnics. Commanders should consider current fire conditions which includes fuel load, wind conditions, and humidity. If the threat of starting a wildfire on a range or training area is high, pyrotechnics should not be utilized. In addition, smoke grenades must never be used in a confined space or thrown into a vegetated area. They can be used in areas clear of vegetation. If a fire starts in a training area or on a range, all training must cease. Better to train without pyrotechnics than not train at all.

3. POC. The POC is the MCBH, S-3 RFMSS Scheduler at (808) 257-8816/4243/2067.



EXAMPLE

UNITED STATES MARINE CORPS
Unit Header

IN REPLY REFER TO:
SSIC
Office Code
Date

MEMORANDUM THRU Commander, XXXXXXXX

To: Installation Range Control Officer, S-3, Marine Corps Base Hawaii,
Kaneohe, Hawaii 96863

Subj: REQUEST FOR UTILIZATION OF MILITARY GRADE PYROTECHNICS SMOKE AND
ARTILLERY SIMULATORS IN THE MARINE CORPS TRAINING AREA BELLOWS
TRAINING AREAS 2 AND 3

Ref: (a) MCBHO 1500.9C

1. The Combat Arms Training Battalion for the Hawaii Army National Guard is scheduled to conduct a STX in support of the Warrior Leader Course, 18-24 July 2009, in the MCTAB, TAs 2 and 3, reserved under RFMSS RCNI 136770, 136771, 136773, 136774 and 136775. A total of 90 NCOs and Soldiers will be trained by 10 instructors and will be accompanied by two Medics and four Support Personnel.

2. Simulated attacks by the OPFOR, upon the NCOs and Soldiers in training, will be managed by the instructors and carried out by the OPFOR. Blank ammunition for individual weapons, smoke, practice grenades and artillery simulators, along with simulated flash-less IED devices are requested to be utilized as listed under the following table:

DODIC	DESCRIPTION	COUNT	LOCATION by GRID
G940	Green Smoke	10	See attachment
G945	Yellow Smoke	10	See attachment
G950	Red Smoke	2	Use for emergency only
G955	Violet Smoke	10	See attachment
L594	M115A2, simulator, ground burst	50	See attachment

3. IAW reference cited in paragraph 1, all smoke will be expended in steel buckets placed on open ground and surfaces free of brush or grass.

4. All simulator type pyrotechnics, capable of producing noise, explosion, flash, and heat, will be utilized on open ground surfaces off of roadways and upon the former runway and upon or very near to roadways, on open surfaces free of brush or grass, to simulate IED explosions, booby traps and hand grenades in close-in dismounted fighting scenarios between the student NCOs and Soldiers and designated OPFOR personnel.

5. Flash-less IED simulator devices, commercially procured and produced, producing a loud explosive sound and expending baby powder only, will be used upon or near roadways to simulate command detonated IEDs upon the student NCOs and Soldiers.

6. All devices, regardless of DODIC, description and purpose(s), will be expended by the course instructors only, wearing and utilizing safety equipment, utilizing steel buckets for smoke and open ground for simulators, with firefighting equipment readily available (fire extinguishers, 5 gallon cans of water, shovels, picks and heavy camouflage net bags for smothering). A minimum of two (2) instructors will be on-hand to manage the training scenarios with one instructor prepared to mitigate any possible fire-starting situations. All residue will be recovered.

7. The point of contact for this request memorandum is XXXXXXXX, at (808) xxx-xxxx (office), (808) xxx-xxxx (cell) or e-mail XXXXXXXXXXXX@XXXX.mil.

XXXX XXXX

APPENDIX P

URBAN OPERATIONS FACILITIES

MARINE CORPS TRAINING AREA BELLOWS	
Type	Marine Corps Training Area Bellows (MCTAB) Military Operations in Urban Terrain (MOUT) Non-Live-fire
Location (Center Grids)	Site #1 04QFJ 33126233 Site #2 04QFJ 32596242 Site #3 04QFJ 32746313
Allowable Weapons	M9 Pistol with Special Effects Small Arms Marking System (SESAMS) Kit M16 Service Rifle with Blank Firing Adaptor (BFA)/SESAMS Kit/UTM M4 Carbine with BFA/SESAMS Kit/UTM M27 with BFA/SESAMS Kit/UTM M249 with BFA M240G with BFA M2 .50Cal with BFA SMAW with simulator
Allowable Munitions (Inside Buildings)	5.56mm Blanks/UTM/SESAMS/CCMCK 7.62mm Blanks 9mm SESAMS munitions L598 Booby Trap Flash simulator (requires MCBH S-3 approval) G811 Grenade Body Practice-not for force on force training G878 Grenade Practice Fuse-not for force on force training
Allowable Munitions (Outside Buildings)	LX21 Simulator (SMAW) Noise Cartridge G930/G940/G945/ smoke grenades (requires MCBH S-3 approval) L598 Booby Trap Flash simulator (requires MCBH S-3 approval) .50 cal/7.62mm/5.56mm Blanks Contractor provided a Battle Field Simulation (BFX) special request, only approved by Installation Range Control Officer (RCO) Demolitions not to exceed 1/4 pound Net Explosive Weight require a special request, only approved by Installation RCO
Direction of Fire	360 degrees
Maximum Range	150 meters

1. Notes

a. Live-fire ammunition (Ball) of any kind is prohibited in the MCTAB MOUT Facility.

b. Bivouacking within the MCTAB MOUT Facility and immediate vicinity is prohibited. Units may bivouac in designated areas only. However, tactical occupation of MOUT structures is authorized 24 hours a day.

c. Illustrations of MCTAB MOUT Facility can be provided when requested.

2. Training Support

a. Buildings in the MCTAB MOUT Facility may be used as "on-the spot" classrooms by the using unit at any time.

b. Collateral equipment for the MCTAB MOUT (mechanical breaching material, concertina wire, etc.) is the responsibility of the training unit. "WHAT YOU BRING TO TRAIN WITH MUST BE TAKEN WITH YOU UPON COMPLETION OF TRAINING."

c. Training units are authorized and highly encouraged to use Instrumented Tactical Engagement Simulations System (I-TESS), 5.56mm and 9mm SESAMS/UTM and Training Improvised Explosive Devices (TIEDs) within the MOUT Facility. These training devices can either be delivered to the training site by the contractor or they can be checked out from the Range Training and Instrumentation Systems Support (RTISS) warehouse in Building 72, 657 Lehua Avenue, Pearl City Annex. Equipment may be requested under the Support tab in your RFMSS request or through KATMAI at gtss.katmaicorps.com. For urgent matters contact the site managers at (808) 257-1767/1110.

d. Atmospherics consisting primarily of furniture such as desks, sofas, chairs and tables are available at the all MOUT facilities. All atmospherics will be returned to its original location at the completion of training.

e. Atmospheric vehicles located within the MCTAB MOUT facilities may be used as fighting positions, but shall not be moved.

3. Scheduling

a. To schedule the MCTAB MOUT Facility, units will submit a Range/Training Area Request via the MCBH Range Facilities Management Support System (RFMSS). If using SESAMS/UTM, a Scheme of Maneuver (SOM) and RM worksheet must be submitted to Range Control 48 hours prior to the conduct of training, per MCHBO 1500.9.

b. Units requesting the use of pyrotechnics to support their training at MCTAB or the Kaneohe Bay Range Training Facility (RTF), must submit a pyrotechnics request to Range Management located on MCBH, Building 216. The standard request form found in Appendix O is the only acceptable format.

4. Check-in Procedures

a. The Officer-in-Charge (OIC) for the MCTAB MOUT Facility must be an E-6 or above. The RSO for the MCTAB MOUT Facility must be an E-5 or above (E-6 for SESAMS). The OIC and RSO must possess an RSO Card issued by MCBH RTAM and be in the OIC / RSO data base in RFMSS.

b. Upon arrival at the MCTAB MOUT Training Facility, the OIC and RSO will receive the Training Facility and Safety Brief.

c. Upon completion of the Safety Brief and MCTAB MOUT Standard Operating Procedures (SOP) review, the OIC and RSO will conduct a pre-training inspection with the Range Control staff. A check-in sheet will be completed and all discrepancies will be annotated on the sheet.

d. The Range Control staff will ensure issue of range flags and road barriers upon occupation of the training area.

5. OIC Duties

a. Conduct safety brief to all unit personnel participating in training.

b. Ensure the overall safe conduct of training and proper use of the Facility.

c. Ensure only authorized and approved ammunition is used within the Facility.

e. Ensure ammunition is properly handled, transported, stored, and accounted for within the facility from the time of receipt to the time of expenditure or turn in.

f. Ensure control of firing areas to prohibit entry by unauthorized personnel.

g. Ensure PSOs/Noncommissioned Officers (NCOs) are assigned and briefed on their duties in support of MOUT Training.

h. Ensure a red flag is placed on the pole at the entrance to the range to alert personnel that training is being conducted in the facility.

i. Ensure all personnel wear required protective equipment.

j. Ensure at the completion of training, all trash is collected and removed from the facility.

k. Be thoroughly familiar with the contents of this SOP.

l. Complete the OIC/RSO checklist prior to conducting training within the facility.

m. Confirm which lots are being fired to ensure proper minimum safe distance is established. Ensure that only weapons with Generation II Universal Bolt Conversion Kits for the M4/M16/M27 and approved munitions are fired. Will ensure no suppressors are installed on weapons when using DODICs AB09/AB10/AB11 and Generation II Universal Bolt Conversion Kits for the M4/M16/M27.

6. RSO Duties

a. Ensure only authorized and approved ammunition is used within the facility.

b. Ensure Surface Danger Zone (SDZ) is clear of all unauthorized personnel when conducting SESAMS/UTM training.

c. When SESAMS/UTM is in use, ensure road guards are posted and the entrance is properly marked by flags/barriers provided by Range Control.

d. During SESAMS/UTM training, ensure everyone in the MCTAB MOUT wear all SESAMS/UTM protective gear.

e. Be present during all training.

f. In the event of an emergency situation/accident, the RSO will notify Range Control at (808) 257-3180 or on the Range Control Net.

g. At the completion of training, ensure all weapons are checked safe and clear.

h. At the completion of training, ensure all personnel take part in a shakedown inspection.

i. At the completion of training, notify Range Control that you are "COLD" and pass a completed ammunition report by Department of Defense Identification Code (DODIC).

j. Be thoroughly familiar with the contents of this SOP.

k. Complete the OIC/RSO checklist prior to conducting training within the Facility.

l. Brief minimum safe engagement distances based upon DODIC casing.

m. Ensure all personnel wear Personal Protective Equipment Level O, approved head protection; full face and eye protection; gloves; hearing protection; and throat and groin protection. The sub-munition, FX 8000, FX 9000, and FX 9003 protective masks are currently approved for use by Navy and Marine Corps personnel when using these DODIC's AB09/AB10/AB11.

7. Special Instructions

a. Minimum safe engagement distance as measured from the muzzle of the weapon to any personnel for 5.56 blanks is five meters.

b. Keep all gates locked at all times. Do not remove or replace locks with temporary locks.

c. OIC/RSOs must be familiar with and avoid environmentally sensitive areas to include the cemetery in Training Area 2, the environmental garden near Gate 2 and the Waimanalo Stream.

d. Ground level window entries are permitted. OIC/RSOs are recommended to address falls in the RM worksheet. If smoke grenades are authorized, which requires a special request via the MCBH S-3, ensure that they are not used inside buildings.

e. Ensure practice grenades (blue bodies) are not thrown directly at an opposing force.

f. Maintain storm awareness. In the event of an electrical or thunderstorm, evacuate the range. Some buildings are made from metal shipping containers and may not be safe during a storm.

g. Subsurface ground disturbance of any kind (digging, trenching, fighting holes or cat holes) is prohibited.

h. Booby trap simulators will be placed below knee level and are prohibited from use in stairwells and ladder wells.

i. The use of grappling hooks within the MCTAB MOUT facility is permissible when approved by the RCO.

j. Entry to the first floor will only be made through a window or doorway.

k. Units may occupy rooftops of buildings equipped with safety rails or forced entry points. Personnel will not hang, pull, climb, or rappel from safety rails. All forced entry points, trap doors, and escape hatches will be secured at the completion of training.

l. Entry to the second or third floors of buildings will be made using only the internal or external stairwells.

m. Trap doors in buildings may be used to hide military items but must be policed after use.

n. Units may scale or climb block walls.

8. SESAMS/UTM

a. Minimum safe engagement distance as measured from the muzzle of the weapon to any personnel for SESAMS/UTM:

(1) SESAMS, 9mm: 7 feet or 2 meters.

(2) SESAMS, 5.56mm: 14 feet or 4 meters. UTM, 5.56mm: Aluminum cased 1.5m and Zinc cased 5m.

b. All weapons used during SESAMS/UTM training WILL BE inspected by the RSO to ensure serviceability and proper installation of SESAMS/UTM kits. He or she will not be the same person who installed the kits. The RSO will issue all SESAMS/UTM ammunition and check all magazines prior to going "HOT". RSOs will utilize the SESAMS RSO Checklist.

c. SESAMS/UTM will be allowed in all single-level and multi-story buildings.

d. The following four safety rules will be adhered to at all times:

(1) Treat every weapon as if it were loaded.

(2) Never point a weapon at anything you do not intend to shoot.

(3) Keep your finger straight and off the trigger until you are ready to fire.

(4) Keep your weapon on safe until you intend to fire.

e. The training unit is required to submit a graphic SOM and RM Worksheet when using SESAMS/UTM. The OIC/RSO must be present with the SOM and RM at all times.

f. Everyone is a Safety Officer. Anyone can call a "CEASE-FIRE" if an unsafe condition is observed. Whenever the command "CEASE-FIRE" is given, all shooters will immediately cease firing, "UNLOAD" and "SHOW CLEAR". After showing clear, shooters will bring weapons to a condition 4 status. All muzzles will be pointed in a safe direction. Shooters will remain in the MOUT site until ordered out by either the Safety NCO or the RSO.

g. If there is a weapon stoppage and/or malfunction, and it cannot be cleared, cease firing and get assistance clearing the weapon.

h. In the event of a weapons malfunction, if the ammunition is found to be defective, a "CEASE-FIRE" will be called and live-fire will stop. Range Control will be notified and will coordinate with the proper personnel to ensure the ammo is inspected/cleared for use. The continued use of the same ammunition will be determined by the result of the inspection, in accordance with MCO 8025.1.

i. Any training that is conducted with the use of SESAMS/UTM will adhere to the following rules:

(1) Weapons will only be made Condition 1 within the assigned SESAMS/UTM training area.

(2) The RSO will inspect the weapons and ensure they have been cleared and are in condition 4 before exiting the assigned SESAMS/UTM training area.

(3) A minimum safe engagement distance from the muzzle of two meters (seven feet) for the 9mm, and four meters (14 feet) for the 5.56mm system must be established and maintained.

j. When using SESAMS/UTM in MOUT sites, all personnel within the SDZ must be wearing the approved personal protective equipment (PPE) for SESAMS/UTM training, to include head, face, and neck protection.

k. Smoking is permitted. The smoking area will be designated by the unit RSO.

l. Positive radio communications must be maintained with Range Control. Radio checks will be performed every hour on the top of the hour.

9. Safety Personnel

a. An RSO will be assigned as the safety supervisor for the exercise.

b. PSO/NCOs will be posted strategically throughout the exercise area for the purpose of spotting safety infractions or potentially hazardous conditions.

c. If an unsafe condition occurs, anyone may call "CEASE-FIRE". The OIC or RSO may suspend the exercise with the command "CEASE-FIRE" or a previously established signal.

10. Safety Equipment

a. All participants involved in SESAMS training (to include anyone within 150 meter danger zone) will wear FX 8000, 9000, or 9003 Protective Face Mask. FX 9000 and 9003 masks are specifically authorized for use with AB05 and AB06.

b. All personnel will wear Personal Protective Equipment Level O, approved head protection; full face and eye protection; gloves; hearing protection; and throat and groin protection. The sub-munition, FX 8000, FX 9000, and FX 9003 protective masks are currently approved for use by Navy and Marine Corps personnel when using these DODIC's. AB09, AB10, and AB11.

c. The MCU-2A/P Chemical Biological mask may be used for face and eye protection, ONLY if the hard outer eye shields and the C2 canister are attached prior to use with the SESAMS training system.

d. A balaclava, towel or neck scarf will be worn so as not to expose any portion of the neck and throat.

e. The utility uniform, flight suit, assault suit or clothing capable of covering the arms and legs entirely shall be worn.

f. Athletic cup or commercial groin protector made to wear on outside of clothing shall be worn.

g. Gloves or commercial protection, that protects the backside of the hand, shall be worn.

11. Safety

a. A safety briefing will precede each training exercise with emphasis on the rules of engagement.

b. The training exercise area will be secured in a manner that precludes unobserved and uninhibited entrance by non-participants.

d. Weapons will be inspected before the exercise to check for damaged or plugged barrels.

e. Load upon command only.

f. Upon hearing the command "CEASE-FIRE" or previously established "ALL STOP" signal, immediately point weapons at the deck, drop to one knee and await further instruction from the PSO or RSO.

g. If at any time your goggles become loose, knocked off or blurred and you can't see, drop to both knees, and cover your face until the exercise is suspended or terminated.

h. The standard protective mask filters particles but will not supply oxygen. A separation distance of at least 10 meters should be maintained from burning grenades. Personnel will wear protective masks before exposure to any concentration of smoke produced by M8 white smoke grenade.

12. Rules of Engagement

a. An occupant will be engaged if he/she displays a weapon or demonstrates violence of action.

b. Intentional headshots are prohibited.

c. Intentional groin shots are prohibited.

d. Minimum safe distances must be maintained.

e. Once an occupant or aggressor has been hit, he or she will be out of action and will play dead until that scenario is over or is instructed otherwise by safety personnel.

f. Do not engage anyone who is not wearing safety equipment.

g. Do not engage safety personnel.

h. Aggressors will not barricade doors.

i. Aggressors will delay action for a count of five after a diversionary device simulation.

j. Aggressors may take cover inside once the assault teams have initiated the action.

13. Check-Out-Procedures

a. Notify Range Control and put the MOUT facility in a "COLD" status.

b. Conduct a post exercise inspection with the OIC and the Range Control staff.

c. Complete a facility checkout sheet and note any deficiencies/problems with the facilities. Facility checkout sheets are available through the Range Control Staff. "WHAT YOU BRING TO TRAIN WITH MUST BE TAKEN WITH YOU UPON COMPLETION OF TRAINING."

d. The OIC/RSO will conduct a post fire inspection of all weapons used. Weapons clearing procedures will include "UNLOAD" and "SHOW CLEAR" for all small arms weapons, and a thorough check to ensure crew served weapons chambers are free of ammunition. Magazines will be inspected for ammunition at this time. The OIC/RSO will ensure all ammunition is accounted for. Grade III ammunition will be properly handled, transported, and turned in to the ammunition supply point in accordance with the unit SOPs and Base Orders.

e. Upon completion of training, a thorough police call of the range and sweep of the buildings will be conducted, prior to contacting Range Control for a post fire inspection. Once completed with the police call, contact

Range Control for your post-fire inspection by the RTF staff. Once you have been cleared, proceed to Range Control to turn in the range usage data and any items issued.

14. In the event of a fire

- a. All training will cease.
- b. The training unit will immediately contact Range Control at (808) 257-3180, and request Emergency Fire Support.
- c. The OIC/RSO will evacuate all personnel, weapons, ammunition, vehicles, and equipment to safe location.
- d. The OIC/RSO will report the status of all personnel and equipment to Range Control via radio communications.
- e. The unit will wait for further guidance from Range Control.

BOONDOCKER TRAINING AREA	
Type	BTA MOUT-Non-Live-fire.
Location	The five sites are located within the exterior perimeter wall. Note: Only Site #5 is SESAMS capable.
Allowable Weapons	M9 Pistol with SESAMS Kit M16 Service Rifle with BFA/UTM M4 Carbine with BFA/SESAMS Kit/UTM M27 with BFA/SESAMS/UTM M249 with BFA M240G with BFA M2 .50Cal with BFA SMAW with simulator
Allowable Munitions (Inside Buildings)	5.56mm Blanks/UTM 7.62mm Blanks 5.56mm and 9mm SESAMS munitions L598 Booby Trap Flash simulator (requires S-3 approval) G811 Grenade Body Practice - not for force on force training G878 Grenade Practice Fuse - not for force on force training
Allowable Munitions (Outside Buildings)	LX21 Simulator (SMAW) Noise Cartridge G930/G940/G945/ smoke grenades (requires S-3 approval) L598 Booby Trap Flash simulator (requires S-3 approval) .50 cal/7.62mm/5.56mm Blanks Contractor provided a BFX special request, only approved by Installation RCO
Direction of Fire	360 degrees
Maximum Range	SESAMS will be contained within Site #5 when all doors and windows are closed

1. Notes

- a. Live-fire ammunition (Ball) of any kind is prohibited in the BTA MOUT Facility.

b. Bivouacking within the BTA MOUT Facility and immediate vicinity is prohibited. Units may bivouac in designated areas only. However, tactical occupation of MOUT structures is authorized 24 hours a day.

c. Illustrations of BTA MOUT Facility can be provided when requested.

2. Training Support

a. Buildings in the BTA MOUT Facility may be used as "on-the spot" classrooms by the RSO when the range is in a "COLD" status.

b. Collateral equipment for the BTA MOUT (mechanical breaching material, concertina wire, etc.) is the responsibility of the using unit. "WHAT YOU BRING TO TRAIN WITH MUST BE TAKEN WITH YOU UPON COMPLETION OF TRAINING."

c. Using units are authorized to use I-TESS, SESAMS, pyrotechnics, and TIEDs within the BTA MOUT Facility. Pyrotechnics are not to be used within confined spaces. These training devices can either be delivered to the training site by the contractor or they can be checked out from the RTISS warehouse in Building 72, 657 Lehua Avenue, Pearl City Annex. The RTISS Contractor can be reached at (808) 455-7891 or (808) 391-4618. Equipment requests may be submitted online via www.tesslcs.com. For urgent matters contact the site manager at (808) 391-4618 or the TSC, at (808) 257-1766. Using units are authorized to use I-TESS, 9mm/5.56 SESAMS/UTM and TIEDs within the BTA MOUT Facility. Pyrotechnics can be used with these devices. These training devices can either be delivered to the training site by the contractor or they can be checked out by the requesting unit. Equipment may be requested under the Support tab in your RFMSS request or through KATMAI at gtss.katmaicorps.com.

3. Scheduling

a. To schedule the BTA MOUT Facility, units will submit a Range/Training Area Request via the MCBH RFMSS.

b. If using SESAMS, an SOM and RM Worksheet must be submitted to Range Control 48 hours prior to the conduct of training.

4. Check-in Procedures

a. The OIC for the BTA MOUT facility must be an E-6 or above. The RSO for the BTA MOUT facility must be an E-5 or above, when using SESAMS/UTM the RSO must be a E-6 or above. The OIC and RSO must possess an RSO Card issued by MCBH RTAM and be in the RFMSS data base.

b. Upon arrival at the BTA MOUT Training Facility, the OIC and RSO will receive the BTA MOUT Training Facility and Safety Brief.

c. Upon completion of the Safety Brief and BTA MOUT SOP review, the OIC and RSO will conduct a pre-training inspection with the Range Control staff. A check-in sheet will be completed and all discrepancies will be annotated on the sheet.

d. The Range Control staff will ensure issue of range flags and road barriers upon occupation of the training area.

5. OIC Duties

a. Conduct safety brief to all unit personnel participating in training.

b. Ensure the overall safe conduct of training and proper use of the Facility.

c. Commanding Officer's will determine the level of medical support required for non-live fire training.

d. Ensure only authorized and approved ammunition is used within the facility.

e. Ensure ammunition is properly handled, transported, stored, and accounted for within the facility from the time of receipt to the time of expenditure or turn in.

f. Ensure control of firing areas to prohibit entry by unauthorized personnel.

g. Ensure PSOs/NCOs are assigned and briefed on their duties in support of MOUT training.

h. Ensure a red flag is placed on the pole at the entrance to the range to alert personnel that training is being conducted in the facility.

i. Ensure all personnel wear required protective equipment.

j. Ensure, at the completion of training, all trash is collected and removed from the facility.

k. Be thoroughly familiar with the contents of this SOP.

l. Complete the OIC/RSO checklist prior to conducting training within the facility.

m. Confirm which lots are being fired to ensure proper minimum safe distance is established. Ensure that only weapons with Generation II Universal Bolt Conversion Kits for the M4/M16/M27 and approved munitions are fired. Will ensure no suppressors are installed on weapons when using the above DODICs and Generation II Universal Bolt Conversion Kits for the M4/M16/M27.

6. RSO Duties

a. Ensure only authorized and approved ammunition is used within the facility. Brief minimum safe engagement distances based upon DODIC casing.

b. Ensure all personnel wear Personal Protective Equipment Level O, approved head protection; full face and eye protection; gloves; hearing protection; and throat and groin protection. The sub-munition, FX 8000, FX

9000, and FX 9003 protective masks are currently approved for use by Navy and Marine Corps personnel when using these DODIC's.

c. Ensure SDZ is clear of all unauthorized personnel when conducting SESAMS/UTM training.

d. When SESAMS/UTM is in use, ensure road guards are posted and the entrance is properly marked by flags/barriers provided by Range Control.

e. During SESAMS/UTM training, ensure everyone in the BTA MOUT wears all SESAMS protective gear.

f. Be present during all training.

g. In the event of an emergency situation/accident, the RSO will notify Range Control at (808) 257-3180 or on the Range Control Net.

h. At the completion of training, ensure all weapons are checked safe and clear.

i. At the completion of training, ensure all personnel take part in a shakedown inspection.

j. At the completion of training, notify Range Control that you are "COLD" and pass a completed ammunition report by DODIC.

k. Be thoroughly familiar with the contents of this SOP.

l. Complete the OIC/RSO checklist prior to conducting training within the facility.

7. Special Instructions

a. Minimum Safe Engagement Distance as measured from the muzzle of the weapon to any personnel for 5.56 blanks is five meters.

b. Ground level window entries are permitted. OIC/RSOs are recommended to address falls in the RM worksheet. If smoke grenades are authorized, which must be submitted as a special request via the MCBH S-3, ensure that they are not used inside buildings.

c. Ensure practice grenades are not thrown directly at an opposing force.

d. Maintain storm awareness. In the event of an electrical or thunderstorm, evacuate the range. The buildings are made of metal and are not safe during a storm.

e. Subsurface ground disturbance of any kind (digging, trenching, fighting holes, or cat holes) is prohibited.

f. Booby trap simulators will be placed below knee level and are prohibited from use in stairwells and ladder wells.

g. The use of grappling hooks within the BTA MOUT facility is prohibited.

h. Entry to the first floor will be made through a window or doorway.

i. Units may occupy roof tops of buildings equipped with safety rails/forced entry points. Personnel will not hang, pull, climb or rappel from safety rails. All forced entry points/trap doors/escape hatches will be secured at the completion of training.

j. Entry to the second or third floors of buildings will be made using only the internal or external stairwells.

k. Trap doors in buildings may be used to hide military items but must be policed after use.

l. Units may scale or climb block walls.

8. SESAMS/UTM

a. Minimum Safe Engagement Distance as measured from the muzzle of the weapon to any personnel for SESAMS/UTM:

(1) SESAMS, 9mm: 7 feet or 2 meters.

(2) SESAMS, 5.56mm: 14 feet or 4 meters/UTM, 5.56mm: Aluminum cased 1.5m and Zinc cased 5m.

b. All weapons used during SESAMS/UTM training WILL BE inspected by the RSO to ensure serviceability and proper installation of SESAMS/UTM kits. He or she will not be the same person who installed the kits. The RSO will issue all SESAMS/UTM ammunition and check all magazines prior to going "HOT". RSOs will utilize the SESAMS/UTM RSO Checklist.

c. SESAMS/UTM will be allowed in all single-level and multi-story buildings.

d. The following four safety rules will be adhered to at all times:

(1) Treat every weapon as if it were loaded.

(2) Never point a weapon at anything you do not intend to shoot.

(3) Keep your finger straight and off the trigger until you are ready to fire.

(4) Keep your weapon on safe until you intend to fire.

e. The training unit is required to submit a graphic SOM and RM Worksheet when using SESAMS/UTM. The OIC/RSO must be present with the SOM and RM at all times.

f. Everyone is a Safety Officer. Anyone can call a "CEASE-FIRE" if an unsafe condition is observed. Whenever the command "CEASE-FIRE" is given,

all shooters will immediately cease firing, "UNLOAD" and "SHOW CLEAR". After showing clear, shooters will bring weapons to a condition 4 status. All muzzles will be pointed in a safe direction. Shooters will remain in the Boondocker MOUT Site until ordered out by either the Safety NCO or the RSO.

g. If there is a weapon stoppage and/or malfunction, and it cannot be cleared, cease firing and get assistance clearing the weapon.

h. The lateral limits for Boondocker MOUT is the building itself. The shoot house is a 0 degree SDZ for SESAMS/UTM. When SESAMS/UTM is being utilized within the house, all windows and doors must be closed. Prior to commencing training, the OIC/RSO will conduct a walkthrough with Range Control personnel to confirm the SOM and ensure the facility is safe to use.

i. In the event of a weapons malfunction, if the ammunition is found to be defective, a "CEASE-FIRE" will be called and live-fire will stop. Range Control will be notified and will coordinate with the proper personnel to ensure the ammo is inspected/cleared for use. The continued use of the same ammunition will be determined by the result of the inspection, in accordance with MCO 8025.1.

j. Any training that is conducted with the use of SESAMS/YTM on MOUT Site #5 will adhere to the following rules:

(1) Weapons will only be made Condition 1 immediately outside the entry way and just prior to making the entry.

(2) The RSO will inspect the weapons and ensure they have been cleared and are in condition 4 before exiting the building. This is to ensure using units do not violate the requirements of reference (g). The OIC/RSO must read reference (g) for all requirements regarding the use of SESAMS/UTM.

(3) A minimum safe engagement distance from the muzzle of two meters (seven feet) for the 9mm, and four meters (14 feet) for the 5.56mm system must be established and maintained.

k. When using SESAMS in MOUT Site #5, all personnel within the building must be wearing the approved personal protective equipment (PPE) for SESAMS training, to include head, face, and neck protection.

l. Smoking is permitted. The smoking area will be designated by the unit RSO.

m. Everyone must have the required PPE while MOUT Site #5 is in a "HOT" status.

n. Positive radio communications must be maintained with Range Control. The call sign for BTA MOUT is "BOONDOCKER MOUT" and the call sign for Range Control is "RANGE CONTROL". Radio checks will be performed every hour on the top of the hour.

9. Safety Personnel

a. An RSO will be assigned as the safety supervisor for the exercise.

b. PSO/NCOs will be posted strategically throughout the exercise area for the purpose of spotting safety infractions or potentially hazardous conditions.

c. If an unsafe condition occurs, anyone may call "CEASE-FIRE". The OIC or RSO may suspend or terminate the exercise with the command "CEASE-FIRE" or a previously established signal.

10. Safety Equipment

a. All participants involved in SESAMS training will wear FX 8000, 9000, or 9003 Protective Face Mask. FX 9000 and 9003 masks are specifically authorized for use with AB05 and AB06. All personnel will wear Personal Protective Equipment Level O, approved head protection; full face and eye protection; gloves; hearing protection; and throat and groin protection. The sub-munition, FX 8000, FX 9000, and FX 9003 protective masks are currently approved for use by Navy and Marine Corps personnel when using these DODIC's. AB09, AB10, and AB11.

b. The MCU-2A/P Chemical Biological mask may be used for face and eye protection, ONLY if the hard outer eye shields and the C2 canister are attached prior to use with the SESAMS training system.

c. A balaclava, towel, or neck scarf will be worn so as not to expose any portion of the neck and throat.

d. The utility uniform, flight suit, assault suit or clothing capable of covering the arms and legs entirely shall be worn.

e. Athletic cup or commercial groin protector made to wear on outside of clothing shall be worn.

f. Gloves or commercial protection, that protects the backside of the hand, shall be worn.

11. Safety

a. A safety briefing will precede each training exercise with emphasis on the rules of engagement.

b. The training exercise area will be secured in a manner that precludes unobserved and uninhibited entrance by non-participants.

c. Medical support requirements are the same as "live-fire" exercises.

d. Weapons will be inspected before the exercise to check for damaged or plugged barrels.

e. Load upon command only.

f. Upon hearing the command "CEASE-FIRE" or previously established "ALL STOP" signal, immediately point weapons at the deck, drop to one knee and await further instruction from the PSO or RSO.

g. If at any time your goggles become loose, knocked off, or blurred and you can't see, drop to both knees and cover your face until the exercise is suspended or terminated.

h. The standard protective mask filters particles but will not supply oxygen. A separation distance of at least 10 meters should be maintained from burning grenades. Personnel will wear protective masks before exposure to any concentration of smoke produced by M8 white smoke grenade.

12. Rules of Engagement

a. An occupant will be engaged if he or she displays a weapon or demonstrates violence of action.

b. Intentional headshots are prohibited.

c. Intentional groin shots are prohibited.

d. Minimum safe distance must be maintained.

e. Once an occupant/aggressor has been hit, he/she will be out of action and will play dead until that scenario is over or is instructed otherwise by safety personnel.

f. Do not engage anyone who is not wearing safety equipment.

g. Do not engage safety personnel.

h. Aggressors will not barricade doors.

i. Aggressors will delay action for a count of five after a diversionary device simulation.

j. Aggressors may take cover inside once the assault teams have initiated the action.

13. Check-Out-Procedures

a. Notify Range Control and put the BTA MOUT facility in a "COLD" status.

b. Conduct a post exercise inspection with the OIC and the Range Control Staff.

c. Complete a facility checkout sheet and note any deficiencies/problems with the facilities. Facility checkout sheets are available through the Range Control Staff. "WHAT YOU BRING TO TRAIN WITH MUST BE TAKEN WITH YOU UPON COMPLETION OF TRAINING."

d. The OIC/RSO will conduct a post fire inspection of all weapons used. Weapons clearing procedures will include "UNLOAD" and "SHOW CLEAR" for all small arms weapons, and a thorough check to ensure crew served weapons chambers are free of ammunition. Magazines will be inspected for ammunition at this time. The OIC/RSO will ensure that all ammunition is accounted for. Grade III ammunition will be properly handled, transported and turned in to the ammunition supply point in accordance with the unit SOPs and Base Orders.

e. Upon completion of training, a thorough police call of the range and sweep of the buildings will be conducted, prior to contacting Range Control for a post fire inspection. Once completed with the police call, contact Range Control for your post-fire inspection by the RTF staff. Once you have been cleared, proceed to Range Control to turn in the range usage data and any items issued.

14. In the event of a fire:

a. All training will cease.

b. The training unit will immediately contact Range Control at (808) 257-3180, and request Emergency Fire Support.

c. The OIC/RSO will evacuate all personnel, weapons, ammunition, vehicles, and equipment to the North East end of HLZ Boondocker near the CH53D helicopter ingress / egress trainers.

d. The OIC/RSO will report the status of all personnel and equipment to Range Control via radio communications.

(5) The unit will	
Location	The two MOUT sites are located within the exterior perimeter wall. 04QFJ2808973355/04QFJ2812073289
Allowable Events	Urban Operations, Blank Fire/Simulated Weapons Training, HRST/TRST Operations, Amphibious Landing Operations, Patrolling, Scout Swimmer Ops, Small Boat Raids and MRV
Allowable Weapons	M9 Pistol with SESAMS M16 Service Rifle with BFA/SESAMS/UTM M4 Carbine with BFA/SESAMS/UTM M27 Service Rifle with BFA/SESAMS/UTM M249 with BFA M240G with BFA M2 .50Cal with BFA
Allowable Munitions (Inside Buildings)	5.56mm Blanks/SESAMS/UTM 7.62mm Blanks 9MM/SESAMS L598 Booby Trap Flash simulator (requires O&T approval) G811 Grenade Body Practice G878 Grenade Practice Fuse
Allowable Munitions (Outside Buildings)	LX21 Simulator (SMAW) Noise Cartridge G930/G940/G945/ smoke grenades (requires O&T approval) L598 Booby Trap Flash simulator (requires O&T approval) .50 cal/7.62mm/5.56mm Blanks Contractor provided a BFX special request, only approved by Installation RCO
Direction of Fire	360 degrees
Maximum Range	SESAMS will be contained within PRTA MOUT when all doors and windows are closed
TRST	The buildings are 25 ft. high with rappel / fast-rope anchor point, and climbing wall on building 2.

1. Safety Personnel Requirements:

a. The OIC and RSO need to be listed in RFMSS as certified in Basic Range Safety, Water, or HRST/TRST.

b. The OIC for the PRTA Facility must be an E-6 or above. The RSO for the PRTA Facility must be an E-5 or above, E-6 or above when using simunitions.

c. The OIC for PRTA HRST/TRST must be an E-6 or above. The RSO for the PRTA HRST/TRST must be an E-5 or above.

d. One HRST/TRST Master per rope station/aircraft. HRST/TRST Masters must be certified/school trained.

e. One corpsman equipped with medical bag, cervical collar and backboard with straps.

f. One safety vehicle with a driver.

2. Special Instructions

a. Subsurface ground disturbance of any kind (digging, trenching fighting holes or cat holes) is prohibited.

b. Booby trap simulators will be placed below knee level and are prohibited from use in stairwells and ladder wells.

c. Entry to the first floor may be made through a window or doorway. Units may occupy rooftops of buildings equipped with safety rails/forced entry points. Personnel will not hang, pull, climb or rappel from safety rails. Use the rappelling points designed specifically for that purpose. Qualified TRST/HRST personnel will be on hand and supervising all TRST/HRST training activities. Units may fast rope or rappel from hovering aircraft onto the buildings.

d. With the exception of top roping or climbing activities, entry to the second floors of buildings will be made using the internal stairwells. If top roping, fast roping, rappelling or climbing, a qualified TRST instructor will be on hand to supervise.

e. Units may scale/climb the installed urban and mountain climbing walls when supervised by a TRST instructor.

f. Bivouacking within the PRTA MOUT Facility is prohibited. However, tactical occupation of building is authorized 24 hours a day. Units may bivouac in within the PRTA fenced area.

g. Illustrations of PRTA MOUT Facility can be provided when requested.

h. There is an archery range near the staging area. Units are advised to stay clear of the archery range.

i. Large convoys need to park all tactical vehicles at the bottom entrances to the PRTA MOUT facility.

- j. No waste water run-off is authorized.
- k. Blank fire, simulations, and pyrotechnics may be authorized for use on beach. Submit special request to RCO.
- l. When conducting Amphibious Operations, the OIC/RSO will scan the beach prior to landing to ensure that there are no seals or turtles hauling-out on the beach, vehicles will not drive onto any vegetation, and all foot traffic moving from beach to MOUT facility will stay within the marked off lanes.

3. Training Support. Using units are authorized to use I-TESS, 9mm/5.56 SESAMS/UTM and TIEDs within the PRTA. Pyrotechnics can be used with these devices. These training devices can either be delivered to the training site by the contractor or they can be checked out by the requesting unit. Equipment may be requested under the Support tab in your RFMSS request or through KATMAI at gtss.katmaicorps.com.

4. Scheduling

a. To schedule the PRTA MOUT Facility, units will submit a request via the MCBH RFMSS.

b. If using SESAMS/UTM, an SOM and RM Worksheet must be submitted to Range Control per BO 1500.9.

c. When requesting to use pyrotechnics, the unit requesting must submit a pyrotechnic request to Range Control. Smoke grenades are authorized, smoke grenades are not permitted in confined spaces.

5. Check-in Procedures

a. The RSO and OIC will check-in with Range Control (building 1584) and sign for the training area.

b. The OIC and RSO must be listed in RFMSS as certified for the event and possess an RSO Card issued by MCBH RTAM.

c. The unit will request an onsite brief and inspection from Range Control Staff, the OIC and RSO will receive a safety brief and conduct a pre-training inspection walk through of the training area before training starts. A check-in sheet will be completed and all discrepancies will be annotated on the sheet.

6. PRTA MOUT use of SESAMS/UTM

a. The lateral limits for PRTA MOUT is the buildings itself. The shoot house is a 0 degree SDZ for SESAMS/UTM. When SESAMS/UTM is being utilized within the house, all windows and doors must be closed. Prior to commencing training, the OIC/RSO will conduct a walkthrough with Range Control personnel to confirm the SOM and ensure the facility is safe to use.

b. When using SESAMS/UTM, all personnel within the building must be wearing the approved personal protective equipment (PPE) for SESAMS training, to include head, face and neck protection.

c. Minimum Safe Engagement Distance as measured from the muzzle of the weapon to any personnel for SESAMS/UTM:

(1) SESAMS, 9mm: 7 feet or 2 meters.

(2) SESAMS, 5.56mm: 14 feet or 4 meters. UTM, 5.56mm: Aluminum cased 1.5m and Zinc cased 5m.

d. The OIC and RSO will:

(1) Confirm which lots are being fired to ensure proper minimum safe distance is established.

(2) Ensure that only weapons with Generation II Universal Bolt Conversion Kits for the M4/M16/M27 and approved munitions are fired.

(3) Will ensure no suppressors are installed on weapons when using the above DODICs and Generation II Universal Bolt Conversion Kits for the M4/M16/M27.

(4) Brief minimum safe engagement distances based upon DODIC casing.

(5) Ensure all personnel wear Personal Protective Equipment Level O, approved head protection; full face and eye protection; gloves; hearing protection; and throat and groin protection. The sub-munition, FX 8000, FX 9000, and FX 9003 protective masks are currently approved for use by Navy and Marine Corps personnel when using SESAMS/UTM DODIC's.

7. During and after training

a. Positive radio communications must be maintained with Range Control. The call sign for PRTA MOUT is "PYRAMID ROCK MOUT" and the call sign for Range Control is "RANGE CONTROL". Radio checks will be performed every hour for a hot status and every two hours for a training status.

b. All forced entry points/trap doors/escape hatches will be secured at the completion of training.

c. Upon completion of training, a through police call of the range, sweep out the buildings, and close all forced entry points/trap doors/escape hatches prior to contacting Range Control for a post fire inspection. Once completed with the police call, contact Range Control for your post-fire inspection by the RTF staff.

8. Check-Out-Procedures

a. Conduct a post exercise inspection with Range Control Staff.

b. Complete a Facility checkout sheet and note any deficiencies/problems with the facilities. Once you have been cleared by a RSI, proceed to Range Control to turn in the range.

9. Medical emergency/fire

a. The OIC/RSO will call an immediate "CEASE-FIRE". The corpsman is the first responder and has the primary duty of providing first aid and/or

emergency medical care as needed. The using unit will immediately contact Range Control at (808) 257-3180. Range Control will call the Federal Fire Department (Fed Fire) and PMO upon unit's request.

b. The OIC/RSO will evacuate all personnel, weapons, ammunition, vehicles, and equipment to the parking lot near the archery range.

c. The OIC/RSO will report the status of all personnel and equipment to Range Control via radio communications.

d. The unit will stand down and wait for further guidance from Range Control.

e. PRTA MOUT is not a live-fire shoot house. No ball/tracer ammunition of any kind is permitted.

f. Smoking is permitted within the MOUT facility. The smoking area will be designated by the unit RSO.

10. Inclement Weather. The building will not be used during thunderstorms or when wind speeds exceed 35 knots. Training may be conducted during inclement weather (rain), at the discretion of the OIC and RSO or Range Control.



APPENDIX Q

MODELING SIMULATIONS AND CLASSROOMS

1. Introduction. The TECOM and PMTRASYS team is comprised of the Training Support Center's System Support Officer and the PMTRASYS's Liaison Officer. Together they are responsible for the Modeling & Simulations contracts, and maintenance. The RTAM classroom and simulator scheduler is responsible for approving the scheduling.

2. PMTRASYS LNO.

Manager: (808) 257-1110 or (808) 620-2166
Location: E Street, Bldg 216

3. Classroom Simulator Scheduler: (808) 257-4203.

4. Marine Aviation Training System Site (MATSS)

Location: C Street, Building 4041

POC Data:

COR: (808) 257-9996

ACOR: (808) 257-1110

Contracted Site Manager: (808) 254-1152

NavAir In-Service Engineer (ISE): (808) 257-0523

Scheduling: 1MAW/MATSS controls schedule for training pilots and crews. Distinguished visitor tours and DV escorts should contact the OIC at (808) 257-0431 or the COR/ACOR.

5. Modular Amphibious Egress Trainer (MAET) and Submerged Vehicle Egress Trainer (SVET). The MAET and SVET are underwater egress trainers with a generic body section representing specific emergency escape exits. This commercial off-the-shelf trainer is designed to simulate underwater disorientation caused by rapidly sinking aircraft and other vehicles. The MAET is modular in that it can be quickly reconfigured to simulate the exits and hatches of various craft (i.e., the MV-22, CH-53, AAV, EFV, LAV-25). A second module, the SVET, is used to train egress from rollover/submerged ground vehicles, replicating the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) and other ground vehicle platforms.

Location: Main Pool

POC Data:

COR: (808) 257-1110

Contracted Site Manager: (808) 257-8714

Scheduling: RFMSS

6. HMMWV Egress Assistance Trainer (HEAT). The HEAT trainer simulates the conditions of a vehicle roll-over and helps teach each crew member how to respond both mentally and physically in the execution of the appropriate immediate action procedures to survive a vehicle roll-over. Conducting this training under controlled conditions provides Marines the opportunity to gain experience of proper egress procedures, while reinforcing the importance of proper seatbelt/harness utilization, developing awareness of the necessary individual and crew skills needed to execute roll-over procedures and training tactical perimeter security drills. HEAT trainers support the

Central Command (CENTCOM) requirement for all Marines to complete vehicle roll-over training prior to deploying to designated combat zones.

Location: BTA

POC Data:

HEAT Operation: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

7. Joint Light Tactical Vehicle (JLTV) Egress Trainer (JET). The JET simulates the conditions of a vehicle roll-over and helps teach each crew member how to respond both mentally, and physically, in the execution of the appropriate immediate action procedures to survive a vehicle roll-over. Conducting this training under controlled conditions provides Marines the opportunity to gain experience of proper egress procedures, while reinforcing the importance of proper seatbelt/harness utilization, developing awareness of the necessary individual and crew skills needed to execute roll-over procedures and training tactical perimeter security drills. The JET supports the Central Command (CENTCOM) requirement for all Marines to complete vehicle roll-over training prior to deploying to designated combat zones.

Location: BTA.

POC Data:

MET Instructor Training and Documentation: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

8. Mine Resistant Ambush Protected (MRAP) Egress Trainer (MET). The MET trainer provides Marines the opportunity to experience vehicle roll-over conditions and rehearse and physically execute the steps necessary to survive a vehicle roll-over. Conducting this training under controlled conditions afford Marines the opportunity to gain experience of proper egress procedures, while reinforcing the importance of proper seatbelt/harness utilization, developing awareness of the necessary individual and crew skills needed to execute roll-over procedures and training tactical perimeter security drills. MET trainers support the CENTCOM requirement for all Marines to complete vehicle roll-over training prior to deploying to designated combat zones.

Location: BTA.

POC Data:

MET Instructor Training and Documentation: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

9. Battle Simulation Center (BSC).

a. Devices Available at BSC:

(1) Combined Arms Command & Control Training Upgrade System (CACCTUS).

(2) MAGTF Tactical Warfare Simulations (MTWS).

(3) Deployable Virtual Training Environment (DVTE).

b. Combined Arms Command & Control Trainer Upgrade System. The CACCTUS is a combined arms staff training system that, enable comprehensive Marine Corps staff, unit, and team training at home station Combined Arms Staff Training (CAST) facility. Distributed training involving CAST facilities is now available across the Marine Corps. CACCTUS is an upgrade to the USMC's CAST that provides fire support training for the Marine Air Ground Task Force (MAGTF) elements up to and including the Marine Expeditionary Brigade (MEB) level. Using the system components and simulation capabilities, 2D and 3D visuals, interfaced C4I, synthetic terrain, and an After Action Review (AAR), CACCTUS immerses trainees in a realistic, scenario-driven environment. The simulated scenarios enable commanders and their battle staffs to train or rehearse combined arms tactics, techniques, procedures, and decision-making processes prior to any physical engagement. In addition, CACCTUS can provide training across live, virtual, and constructive training networks through interoperability with appropriate Command, Control, Communication, Computers, and Intelligence (C4I) systems in a training environment.

c. MAGTF Training Warfare Simulation. The MAGTF Tactical Warfare Simulation (MTWS) is the Marine Corps only constructive, aggregate resolution simulation system used to support the training of Marine commanders and their battle staffs in MAGTF warfighting principles/concepts and as well as associated command and control procedures. Using complex computer-simulated behavior models, MTWS provides an interactive, decision-based, real time, war game representing the six warfighting functional areas of command and control, maneuver, fires, intelligence, command and control, logistics and force protection. Its modeling breadth and flexibility enables users to represent and exercise a wide variety of combat scenarios to prepare leaders to face the military challenges of today's world. MTWS is designed to support the training of commanders and their staffs in exercises involving live and simulated land, air, and Naval forces at all operational command levels. The system supports all levels of command throughout the Marine Expeditionary Force (MEF) and Joint Task Force (JTF). MTWS can be used as a multi-sided war game, including red, blue, civilian, and non-aligned sides. The system can also be used to validate specific operational plans against a variety of enemy and environmental situations.

d. Deployable Virtual Training Environment. The Deployable Virtual Training Environment (DVTE) is a laptop PC-based simulation system capable of emulating organic and supporting Infantry Battalion weapons systems and training scenarios to facilitate Training and Readiness (T&R) based training. Its portable configuration allows Marines to train in areas where there are few options for training; garrison, aboard ship, at remote reserve locations, and deployed. DVTE training includes language and culture training, platoon and squad level tactics, employment of supporting arms, and various Recognition of Combatants (ROC) packages. DVTE is part of a Commander's "training toolkit" contributing to the building block approach to standards based training focusing on achieving an improved level of combat readiness. DVTE software applications are divided into two groups: the Combined Arms Network (CAN) and the Infantry Tool Kit (ITK). The simulation programs range from individual skill sustainment to battalion level operation. The CAN uses GenSim software to provide combined arms training for forward observers,

forward air controllers, fire support team leaders and various weapon systems (AAV, 1M1 Tank, LAV, MVTR, AH-1, AV-8B). When connected to the JSAF, a constructive mission building platform, it can support combined arms missions up to the battalion level. In addition, DVTE can interface Marine Corps green gear (AFATDS & Strike Link) in order to facilitate training for a variety of fire support missions. The ITK is geared toward individual and small unit training and consists of a number of stand-alone applications. Combined arms, enduring combat actions, first aid/CASEVAC, fixed site security, Improvised Explosive Device (IED) defeat, motorized operations, and military operations in urban terrain (MOUT) are among the Marine Corps Common Skills addressed by the various DVTE training games and simulations.

e. One of the software components of the ITK is Virtual Battle Space (VBS), in which groups of students can interact to complete mission scenarios in a first-person shooter format. Instructors can create scenarios to meet unique mission objectives and make real-time modifications to the scenario environment as students complete the mission. Instructors have the ability to control all scenario environment features to include terrain, the position and presence of structures and obstacles, the presence and behavior of constructive entities, weather, vehicles, and weapon capabilities. VBS also has a playback capability that supports student debriefs after scenario completion.

Location: Mokapu Street, Building 6036.

POC Data:

COR: (808) 257-1110

Contracted Site Manager: (808) 257-3550

Scheduling: RFMSS

Parking: Behind the BSC, Building 6036

10. Indoor Simulated Marksmanship Trainer III (ISMT-III)

a. The purpose of the ISMT-III is to provide the USMC with the ability to train individuals, fire teams, and squads effectively and efficiently to the approved standards of combat skills and readiness, in a limited space without the expenditure of costly live ammunition. The Indoor Simulated Marksmanship Trainer (ISMT) uses simulation to instill and sustain Marines and Sailors in marksmanship fundamentals, crew served weapons employment, call for fire, and tactical decision making. A standalone ISMT can support up to five firing points while simulating known and unknown distance ranges, or eight assigned weapons while executing tactical scenarios within Virtual Battlespace (VBS). When three ISMTs are networked together to form an Infantry Squad Trainer (IST), the system can support 15 firing points while simulating known and unknown distance ranges, or up to twenty-four assigned weapons while executing tactical scenarios within VBS.

b. Simulators available with the ISMT are generally in line with the Infantry Battalion table of equipment allocation. Each MCBH location maintains a different assortment of the following:

Pistol: M9

Rifle: M4, M16A4, and M27

Shotgun: M1014

Grenade Launcher: M203

Machine Gun: MP5, M2, M240, M249, and Mk19
Rocket: M72, M136, and Mk153
Mortar: M224 and M252

c. See RFMSS for more detail regarding the MCBH ISMT-III locations and weapons allocations by site.

d. Marksmanship fundamentals are instilled and sustained through simulated qualification tables of fire that provide real time and After Action Review (AAR) feedback of the shooter's line of sight, point of aim, and trigger pull for the entire engagement. The ISMT supports Crew Served Weapon (CSW) employment by augmenting live fire with simulated qualification tables of fire, added repetitions of target engagements for Standing Operating Procedures (SOPs) refinement, and simulated collective environments where CSWs support infantry maneuver. Fires support Teams (FIST) are able to augment live fire with added repetitions in fire missions and refine Battle drill SOPs. Exercises in tactical decision making are achieved in VBS. Shoot or no-shoot scenarios are ideal for exercising tactical decision making for individuals, Team Leaders, and Squad Leaders.

Locations: Pu'uloa Range Complex, Mokapu Street Bldg 1045 and 3rd Street Bldg 243.

POC Data:

COR: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

10. Amphibious Assault Vehicle (AAV) Turret Trainer (TT). The AAV-TT is a stand-alone trainer that uses a surplus AAV turret and modified ISMT weapons (M-2 and MK-19) to provide individual, crew, and section gunnery training. The system consists of an instructor operator station, driver station, simulation and sound computer, JSAF computer, and a high-fidelity communications system.

Location: 3rd Street, Bldg 243.

POC Data:

COR: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

11. Operator Driving Simulator (ODS). The USMC-ODS is a computer-based operator driving simulator used to provide entry and sustainment level operator familiarization training to MOS 35XX and all incidental drivers. It provides student operators with immersive and realistic experiences in operating the selected vehicles both on/off road in multiple training scenarios. The ODS provides real-world training in vehicle operations in environments drivers may experience in various road and weather conditions. Cab configurations include interchangeable vehicle extension kits consisting of dash panels, steering wheels, panels to restrict drivers view based on vehicle type and vehicle dynamics software to replicate Medium Tactical Vehicle Replacement (MTVR), MTVR Armor System (MAS), Up-Armored High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), Mine-Resistant Ambush Protected (MRAP)

Cougar (Category I, 4x4 and Category II, 6x6); Buffalo (Category III) and MRAP All-Terrain Vehicle (M-ATV). ODS cab configurations are installed in stationary facilities and mobile trailers currently at 26 locations; 8 Active Duty and 19 Reserve sites. Contractor Logistics Support (CLS) representatives serve as primary operators and system maintainers. Location: BTA.

POC Data:

MET Instructor Training and Documentation: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

12. Combat Convoy Simulator (CCS). The CCS trainers provide an immersive training environment for convoy operations to include basic procedures for drivers, gunners, and passengers including, but not limited to, weapons usage and target engagement, driver evasive action, command and control procedures within the vehicle and convoy, as well as general familiarity with terrain/environment to provide training for Marines in tactical scenarios. The CCS shall provide training for both vehicle operators and individuals in both vehicles and small arms weapon utilization, command and control, and IED counter-measures. CCS trainers support the Urgent Universal Need Statement requirement approved by the Marine Requirements Oversight Council to train Marines in convoy operations prior to deploying to designated combat zones. The CCS is the third generation of convoy trainers.

Location: BTA.

POC Data:

MET Instructor Training and Documentation: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: (808) 257-3002
Scheduling: RFMSS

13. Supporting-Arms Virtual Trainer (SAVT). The Supporting Arms Virtual Trainer (SAVT) enhances operational readiness and tactical proficiency of USMC Joint Terminal Attack Controllers (JTAC), Forward Observers (FO), and Forward Air Controllers (FAC). The simulator provides Marines with a virtual environment for training using scenarios that require the placement of tactical ordnance on selected targets using Joint Close Air Support (JCAS) and Observed Fire procedures. These scenarios allow for practical application of Naval Surface Fire Support (NSFS), artillery and mortar fire, neutralization, suppression, illumination, interdiction and harassment fire missions.

Location: BTA.

POC Data:

COR: (808) 257-1110
Maintenance or Repairs: (808) 257-1110
Contracted Site Manager: N/A
Scheduling: RFMSS

APPENDIX R

MCBH RANGE CARDS

ALPHA RANGE ("A" RANGE) Puuloa	
Type	Known Distance, small arms rifle range designed to support individual small arms training and evaluation
Target Distances	100-1000 yards
Authorized Weapons	Shoulder-fired Service and Precision Rifles.
Authorized Munitions	Up to .30 cal including 300 WINMAG from 100-1000 Yards
Firing Lines	10
Firing Points	40 at 100 yards & 200 yards 35 at 300 yards 25 at 500 yards 10 at 600 yards 12 at 700 yards, 800 yards, 900 yards, & 1000 yards
Target Carriages	40, 6 ft. x 6 ft.
BOUNDARY LIMITATIONS	
1000 yard Lateral Limits	West Grid: 04QFJ0448858135/MAG AZ LLL 26(deg) East Grid: 04QFJ0451858148/MAG AZ RLL 26(deg)
900 yard Lateral Limits	West Grid: 04QFJ0452858053/MAG AZ LLL 26(deg) East Grid: 04QFJ0455858065/MAG AZ RLL 26(deg)
800 yard Lateral Limits	West Grid: 04QFJ0456857970/MAG AZ LLL 26(deg) East Grid: 04QFJ0459857983/MAG AZ RLL 26(deg)
700 yard Lateral Limits	West Grid: 04QFJ0460857888/MAG AZ LLL 26(deg) East Grid: 04QFJ0463857901/MAG AZ RLL 26(deg)
600 yard Lateral Limits	West Grid: 04QFJ0467457821/MAG AZ LLL 26(deg) East Grid: 04QFJ0470757835/MAG AZ RLL 26(deg)
500 yard Lateral Limits	West Grid: 04QFJ0469557730/MAG AZ LLL 26(deg) East Grid: 04QFJ0474757753/MAG AZ RLL 26(deg)
300 yard Lateral Limits	West Grid: 04QFJ0475257556/MAG AZ LLL 26(deg) East Grid: 04QFJ0481857583/MAG AZ RLL 26(deg)
200 yard Lateral Limits	West Grid: 04QFJ0476457464/MAG AZ LLL 27(deg) East Grid: 04QFJ0484957496/MAG AZ RLL 26(deg)
100 yard Lateral Limits	West Grid: 04QFJ0478357369/MAG AZ LLL 27(deg) East Grid: 04QFJ0488157414/MAG AZ RLL 26(deg)
Close-Out List	None

1. Unknown distance firing, fragmenting, explosive, or tracer projectiles are prohibited.

2. Targetry

a. "A" Range is equipped with manual target carriages. "A" range is also equipped with powered moving targets scored by location of misses and hits (LOMAH). Units must provide an operator for the system. Coordination can be made with the Pu'uloa range staff for training on the LOMAH system.

b. Authorized targetry for "A" Range includes paper, plastic or cardboard targets mounted either on 6 ft. x 6 ft. wooden target frames, or mounted to handheld wooden sticks.

c. Targets must be positioned above the Pit Area berm to ensure projectiles land within the designated impact area.

d. No ricochet producing target materials (i.e. steel, nails etc.) are authorized in target or target mount construction.

3. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities on "A" Range:

a. Limits of Fire. Stay within the protective berms. Targets 1 and 40 are the respective left and right lateral limits of fire from the 100 and 200 yard lines. Target 35 is the right limit from the 300 yard line. Target 25 is the right limit from the 500 yard line. If firing from the 600 yard line the right lateral limit is reduced to target point 10. When firing from the 700 to 1,000 yard lines, target points 3-14 will be used. Individual shooters' lateral limits are the right and left edge of their respective targets only.

b. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "CEASE-FIRE". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

c. Full auto or burst fire is not authorized.

d. Firing Line Supervision. The minimum level of supervision for the firing line aboard "A" Range is the Officer-in-Charge (OIC) and RSO. Supervisory personnel cannot perform their duties and participate in firing simultaneously.

e. Pit Supervision. A competent, authoritative individual must be assigned to supervise all activities in the Pit Area. During firing, the Pit Supervisor is responsible for the safe supervision of all personnel in the pits. The Pit Supervisor must have positive communication with the RSO at all times during firing.

f. The RSO/OIC must be qualified to use 700 to 1,000 yard lines and must provide proof of certification from the training unit to S-3, upon request.

g. Only 7.62mm or .300 WINMAG precision sniper/match rifles with match grade ammunition (Department of Defense Identification Code AA11, AB43, A191 or equivalent) are authorized for use on "A" Range from the 700 to 1,000 yard lines.

h. Rifles will be fired only from the supported prone position on "A" Range at the 700 to 1,000 yard lines.

i. All rifles must have been zeroed and then confirmed at the 600 yard line prior to firing on "A" Range 700 to 1,000 yard lines.

j. Only trained and qualified service snipers and students under qualified sniper supervision (platoon or formal school training/evaluation) will be authorized to fire from the "A" Range 700 to 1,000 yard lines. Exemptions to this policy must be requested, in writing, to the Installation RCO via the Range Training Facility (RTF) OIC.

k. Only target points 3-14 will be used in the pit area. Firing points will be marked accordingly on the "A" Range 700 to 1,000 yard lines. While in the pits, all personnel will remain under the pit canopy and on the catwalk during firing.

l. Only targetry provided by the Pu'uloa RTF is authorized for use on "A" Range.

m. Corpsman and safety vehicle are required for all live fire. Corpsman and a safety vehicle must be physically present on the range complex.

4. Planning Requirements. "A" Range is scheduled through RFMSS and approved by MCBH, S-3. Desired use of 6 ft. x 6 ft. target backings or portable range speakers require prior coordination with Pu'uloa RTF Range Control.

5. Access Control.

a. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

b. "A" Range firing lines are positioned adjacent to "B" Range. Therefore, both ranges have overlapping SDZs when in use. For this reason, strict supervision of personnel movement is necessary. All personnel entering and exiting the range must use the access road behind the 600 yard line. At no time will personnel cross any lateral berms.

c. The conduct and movement of personnel in the Pit/Target Area must also be strictly controlled, while firing is in progress. All other Pit Area safety features and precautions are covered in the Range and Pit Safety briefs. When live-fire is in progress on "B" Range, all movement in and out of the pit area must be conducted via the right side of the range.

6. Facilities

a. Water Spigots. None; pit water spigots are non-potable.

b. Heads. The heads associated with "A" Range must be kept clean and properly stocked. RSOs will ensure all heads are policed before the range is turned back over to Range Control. "A" Range heads are located at the following areas:

(1) A co-use head (portable toilet) behind the 200/300 and 500 yard line, on the left hand side of the range.

(2) Two co-use heads (portable toilets) in the pits.

c. Electrical Outlets. There are several 110-volt electrical outlets for general use at the following locations:

(1) At the Sound Shed in the Pits.

(2) At the Target Shed in the Pits.

d. Speakers. Tripod-mounted portable range speakers should be used for clear communication on the firing line when more than half the width of the range is in use. A separate radio and coordination with Pu'uloa RTF Range Control is required for its use.

e. Buildings/Access. If use of the Pit Sound Shed and or Target Shed is required, prior coordination with Pu'uloa RTF Range Control is necessary for access and instructions.

f. Ammunition/Armorer Tables. There are ammunition and armorer tables located behind the center of each firing line. They are designed to facilitate the sorting and distribution of ammunition, as well as a surface for armorers to conduct weapons repair and maintenance.

g. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and Marksmanship Training Unit (MTU) facility (Building 48).

BRAVO RANGE ("B" RANGE) Puuloa	
Type	Known Distance, small arms rifle range designed to support individual small arms training and evaluation
Target Distances	25-600 yards
Authorized Weapons	Shoulder fired Service and Precision Rifles
Authorized Munitions	Up to .30 cal
Firing Lines	6
Firing Points	60 at 25 yards, 100 yard, 200 yards, 300 yards, 500 yards & 600 yards
Target Carriages	60, 6 ft. x 6 ft.
BOUNDARY LIMITATIONS	
600 yard Lateral Limits	West Grid: 04QFJ0477457823/MAG AZ LLL 26(deg) East Grid: 04QFJ0490357874/MAG AZ RLL 26(deg)
500 yard Lateral Limits	West Grid: 04QFJ0479957734/MAG AZ LLL 26(deg) East Grid: 04QFJ0494157794/MAG AZ RLL 26(deg)
300 yard Lateral Limits	West Grid: 04QFJ0487657565/MAG AZ LLL 26(deg) East Grid: 04QFJ0501857624/MAG AZ RLL 26(deg)
200 yard Lateral Limits	West Grid: 04QFJ0490557478/MAG AZ LLL 26(deg) East Grid: 04QFJ0505657546/MAG AZ RLL 26(deg)
100 yard Lateral Limits	West Grid: 04QFJ0494257397/MAG AZ LLL 26(deg) East Grid: 04QFJ0509357459/MAG AZ RLL 26(deg)
25 yard Lateral Limits	West Grid: 04QFJ0497257326/MAG AZ LLL 26(deg) East Grid: 04QFJ0513257396/MAG AZ RLL 26(deg)
Close-Out List	None

1. Unknown distance firing, fragmenting, explosive, or tracer projectiles are prohibited.

2. Targetry

a. "B" Range is equipped with manual target carriages and manual moving targets.

b. Authorized targetry for "B" Range includes paper, plastic, or cardboard targets mounted either on 6 ft. x 6 ft. wooden target frames, or mounted to handheld wooden sticks.

c. Targets must be positioned above the Pit Area berm to ensure projectiles land within the designated impact area. d. No ricochet producing target materials (i.e., steel, nails etc.) are authorized in target or target mount construction.

3. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities on "B" Range:

a. Limits of Fire. Stay within the protective berms. Targets 1 and 60 are the respective left and right lateral limits of fire from 25-600 yards. Individual shooters' lateral limits are the right and left edge of their respective targets only.

b. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a

projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "CEASE-FIRE". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

c. Full auto or burst fire is not authorized.

d. Firing Line Supervision. The minimum level of supervision for the firing line aboard "B" Range is the OIC and RSO. Supervisory personnel cannot perform their duties and participate in firing simultaneously.

e. Pit Supervision. A competent, authoritative, individual must be assigned to supervise all activities in the Pit Area. During firing, the Pit Supervisor is responsible for the safe supervision of all personnel in the Pits. The Pit Supervisor must have positive communication with the RSO at all times during firing.

f. Corpsman and safety vehicle are required for all live fire training. Corpsman and a safety vehicle must be physically present on the range complex.

4. Planning Requirements. "B" Range is scheduled through RFMSS and approved by MCBH S-3. Desired use of 6 ft. x 6 ft. target backings or range speakers requires prior coordination with Pu'uloa RTF Range Control. "B" Range availability is limited due to its routine use for annual rifle training. This training is conducted from 0700-1700 daily, for approximately 32 weeks out of the year.

5. Access Control

a. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

b. "B" Range firing lines are positioned adjacent to "A" Range. Therefore, both ranges have overlapping SDZs when in use. For this reason, strict supervision of personnel movement is necessary. All personnel entering and exiting of range must use the access road behind the 600 yard line. At no time will personnel cross any lateral berm.

c. The conduct and movement of personnel in the Pit/Target Area must also be strictly controlled, while firing is in progress. All other Pit Area safety features and precautions are covered in the Range and Pit Safety briefs. When live-fire is in progress on "A" Range, all movement in and out of the pit area must be conducted via the left side of the range.

6. Facilities

a. Water Spigots. There is one spigot located behind the sound shed in the pits.

b. Heads. The heads associated with "B" Range must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. "B" Range heads are located at the following areas:

10 Nov 21

(1) Co-use heads (portable toilets) are located at the "big end" of the firing lines behind the 100/200 and 300 yard lines, and at the "little end" of the firing line behind the 500 yard line.

(2) Co-use heads (portable toilets) are located on the "big" and "little" ends of the pits.

c. Electrical Outlets. There are several 110-volt electrical outlets for general use at the following locations:

(1) At the Sound Shed in the Pits.

(2) At the Target Sheds in the Pits.

d. Speakers. Pole-mounted range speakers should be used for clear communication on the firing line and between the firing line and the pits when more than half the width of the range is in use. A separate radio and coordination with Pu'uloa RTF Range Control is required for its use.

e. Buildings/Access. If use of the Pit Sound Shed and or Target Shed is required, prior coordination with Pu'uloa RTF Range Control is necessary for access and instructions.

f. Ammunition/Armorer Tables. There are ammunition/armorer tables located behind the center of each firing line. They are designed to facilitate the sorting and distribution of ammunition as well as a surface for armorers to conduct weapons repair and maintenance.

g. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and MTU facility (Building 48).

CHARLIE RANGE ("C" RANGE) Puuloa	
Type	Known Distance, small arms range designed to support individual small arms training and evaluation
Target Distances	0-50 yards
Authorized Weapons	Service rifle Service shotgun Service pistols
Authorized Munitions	Up to 12 Gauge Pistol up to .45 cal. 5.56mm
Firing Lines	3
Firing Points	25
Target Carriages	25
BOUNDARY LIMITATIONS	
50 yard Lateral Limits	West Grid: 04QFJ0523657426/MAG AZ LLL 29(deg) East Grid: 04QFJ0527157433/MAG AZ RLL 28(deg)
25 yard Lateral Limits	West Grid: 04QFJ0524157398/MAG AZ LLL 29(deg) East Grid: 04QFJ0527557406/MAG AZ RLL 28(deg)
15 yard Lateral Limits	West Grid: 04QFJ0524357387/MAG AZ LLL 29(deg) East Grid: 04QFJ0527757394/MAG AZ RLL 26(deg)
Close-Out List	None

1. Targetry

a. "C" Range is equipped with a 25 target point pneumatic turning target system.

b. Authorized targetry for "C" Range is cardboard "E" type targets only. Paper re-faces are authorized.

c. Targets will affix to the turning mechanisms by wooden 2 in. x 2 in. sticks only.

d. Targets must be positioned above the target mechanism to ensure projectiles land within the impact berm.

e. No ricochet producing target materials (i.e., steel, nails etc.) are authorized in target mount construction.

f. For use other than United States Marine Corps (USMC) annual pistol and rifle training details, targets will be provided by the using unit unless prior coordination has been made with Pu'uloa RTF Range Control.

2. Safety. In addition to general range safety procedures, the following requirements are specific for activities aboard "C" Range:

a. Limits of Fire. Targets 1 and 25 are the respective left and right lateral limits of fire for "C" Range. Individual shooters' lateral limits are the right and left edge of their respective targets only.

b. Personnel conducting pistol training will bench or holster their weapon and personnel conducting training with rifles will come to sling arms

or a controlled carry when personnel move forward of the firing line and will face up range until directed to proceed with the course of fire.

c. A loaded rifle or pistol will not be passed to another person. However, range personnel or service instructors may take a loaded weapon from a shooter to demonstrate or to clear a misfire or stoppage.

d. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "CEASE-FIRE". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

e. Full auto fire is not authorized.

f. Corpsman and safety vehicle are required for all live fire training. Corpsman and a safety vehicle must be physically present on the range complex.

3. Planning Requirements. "C" Range is scheduled through RFMSS and approved by MCBH S-3.

4. Access Control. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

5. Facilities

a. Water Spigots. None.

b. Heads. There is a "C/D" Range co-use head located behind the 50 yard line. Heads must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control.

c. Electrical Outlets. Electrical outlets are located at the control shed between "C" and "D" Ranges.

d. Ammunition/Armorer Tables. There are ammunition or armorer tables located at the 50 yard line. They are designed to facilitate the sorting and distribution of ammunition, as well as a surface for armorers to conduct weapons repair and maintenance.

e. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and MTU facility (Building 48).

DELTA RANGE ("D" RANGE) Puuloa	
Type	Known Distance, small arms range designed to support individual small arms training and evaluation
Target Distances	0-25 yards
Authorized Weapons	Service rifles Service shotguns Service pistols
Authorized Munitions	Up to 12 Gauge Pistol up to .45 cal. 5.56mm
Firing Lines	3
Firing Points	20
Target Carriages	20
BOUNDARY LIMITATIONS	
25 yard Lateral Limits	West Grid: 04QFJ0529557412/MAG AZ LLL 28(deg) East Grid: 04QFJ0532557418/MAG AZ RLL 27(deg)
3 yard Lateral Limits	West Grid: 04QFJ0529657401/MAG AZ LLL 29(deg) East Grid: 04QFJ0532757407/MAG AZ RLL 26(deg)
Close-Out List	None

1. Targetry

a. "D" Range is equipped with a 20 target point pneumatic turning target system.

b. Authorized targetry is cardboard "E" type targets only. Paper re-faces are authorized.

c. Targets will affix to the turning mechanisms by wooden 2 in. x 2 in. sticks only.

d. Targets must be positioned above the target mechanism to ensure projectiles land within the impact berm.

e. No ricochet producing target materials (i.e., steel, nails, etc.) are authorized in target mount construction.

f. For other than USMC annual pistol and rifle training details, targets will be provided by the training unit unless prior coordination has been made with Pu'uloa RTF Range Control.

2. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities aboard "D" Range:

a. Limits of Fire. Targets 1 and 20 are the respective left and right lateral limits of fire for "D" Range. Individual shooters' lateral limits are the right and left edge of their respective targets only.

b. Personnel conducting pistol training will bench or holster their weapon. Personnel conducting training with rifles will come to sling arms or a controlled carry when personnel move forward of the firing line and will face up range until directed to proceed with the course of fire.

c. A loaded rifle or pistol will not be passed to another person. However, range personnel or service instructors may take a loaded weapon from a shooter to demonstrate or to clear a misfire or stoppage.

d. Full auto fire is not authorized.

e. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "CEASE-FIRE". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

f. Corpsman and safety vehicle are required for all live fire training. Corpsman and a safety vehicle must be physically present on the range complex

3. Planning Requirements. "D" Range is scheduled through RFMSS and approved by MCBH, S-3.

4. Access Control. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

5. Facilities

a. Water Spigots. None.

b. Heads. There is a "C/D" Range co-use head located behind the 25 yard line. Heads must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control.

c. Electrical Outlets. Electrical outlets are located at the control shed between "C" and "D" ranges.

d. Ammunition/Armorer Tables. There are ammunition and armorer tables located behind the covered 25 yard line. They are designed to facilitate the sorting and distribution of ammunition, as well as a surface for armorers to conduct weapons repair and maintenance.

e. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and MTU facility (Building 48).

ECHO RANGE ("E" RANGE) Puuloa	
Type	Known Distance, small arms range designed to support individual small arms training and evaluation
Target Distances	0-50 yards
Authorized Weapons	Service rifle Service shotgun Service pistols
Authorized Munitions	Up to 12 Gauge Pistol up to .45 cal. 5.56mm
Firing Lines	3
Firing Points	30
Target Carriages	30
BOUNDARY LIMITATIONS	
50 yard Lateral Limits	West Grid: 04QFJ0534557454/MAG AZ LLL 29(deg) East Grid: 04QFJ0538257461/MAG AZ RLL 28(deg)
25 yard Lateral Limits	West Grid: 04QFJ0534857436/MAG AZ LLL 29(deg) East Grid: 04QFJ0538557443/MAG AZ RLL 28(deg)
3 yard Lateral Limits	West Grid: 04QFJ0535057422/MAG AZ LLL 29(deg) East Grid: 04QFJ0538857430/MAG AZ RLL 26(deg)
Close-Out List	None

1. Targetry

a. "E" Range is equipped with a 30 target point pneumatic turning target system.

b. Authorized targetry for "E" Range is cardboard type targets only. Paper re-faces are authorized.

c. Targets will affix to the turning mechanisms by wooden 2 in. x 2 in. sticks only.

d. Targets must be positioned above the target mechanism to ensure projectiles land within the impact berm.

e. No ricochet-producing target materials (i.e., steel, nails, etc.) are authorized in target mount construction.

f. For other than USMC annual pistol or rifle training details, targets will be provided by the training unit unless prior arrangements have been made with Pu'uloa RTF Range Control.

2. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities aboard "E" Range:

a. Limits of Fire. Targets 1 and 30 are the respective left and right lateral limits of fire for "E" Range. Individual shooters lateral limits are the right and left edge of their respective targets only.

b. Personnel conducting pistol training will bench or holster their weapon. Personnel conducting training with rifles will come to sling arms or a controlled carry when personnel move forward of the firing line and will face up range until directed to proceed with the course of fire.

c. A loaded rifle or pistol will not be passed to another person. However, range personnel or service instructors may take a loaded weapon from a shooter to demonstrate or to clear a misfire or stoppage.

d. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "CEASE-FIRE". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

e. Full auto fire is not authorized.

f. Corpsman and safety vehicle are required for all live fire training. Corpsman and a safety vehicle must be physically present on the range complex.

3. Planning Requirements. "E" Range is scheduled through RFMSS and approved by MCBH S-3.

4. Access Control. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

5. Facilities

a. Water Spigots. There are water spigots and drinking fountains located under the covered firing line.

b. Heads. A co-use head (portable toilet) is located behind the covered firing line, on the left hand side of the range. Heads must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control.

c. Electrical Outlets. Electrical outlets are located center line, at the covered firing line soundtower.

d. Ammunition/Armorer Tables. There are ammunition and armorer tables located behind the covered firing line. They are designed to facilitate the sorting and distribution of ammunition, as well as a surface for armorers to conduct weapons repair and maintenance.

e. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and MTU facility (Building 48).

FOXTROT RANGE ("F" RANGE) Puuloa	
Type	Known Distance, small arms range designed to support individual small arms training and evaluation
Target Distances	0-50 yards
Authorized Weapons	Service rifle Service shotgun Service pistol
Authorized Munitions	Up to 12 Gauge Pistol up to .45 cal. 5.56mm
Firing Lines	3
Firing Points	40
Target Carriages	40
BOUNDARY LIMITATIONS	
50 yard Lateral Limits	West Grid: 04QFJ0541657469/MAG AZ LLL 29(deg) East Grid: 04QFJ0547157479/MAG AZ RLL 28(deg)
25 yard Lateral Limits	West Grid: 04QFJ0541957450/MAG AZ LLL 29(deg) East Grid: 04QFJ0547457460/MAG AZ RLL 28(deg)
3 yard Lateral Limits	West Grid: 04QFJ0542157411/MAG AZ LLL 29(deg) East Grid: 04QFJ0547757451/MAG AZ RLL 26(deg)
Close-Out List	None

1. Targetry.

a. "F" Range is equipped with a 40 target point pneumatic turning target system.

b. Authorized targetry for "F" Range is cardboard "E" type targets only. Paper re-faces are authorized.

c. Targets will affix to the turning mechanisms by wooden 2 in. x 2 in. sticks only.

d. Targets must be positioned above the target mechanism to ensure projectiles land within the impact berm.

e. No ricochet producing target materials (i.e., steel, nails, etc.) are authorized in target mount construction.

f. For other than USMC annual pistol and rifle training details, targets will be provided by the training unit, unless prior planning has been made with Pu'uloa RTF Range Control.

2. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities aboard "F" Range:

a. Limits of Fire. Targets 1 and 40 are the respective left and right lateral limits of fire for "F" Range. Individual shooters lateral limits are the right and left edge of their respective targets only.

b. Personnel conducting pistol training will bench or holster their weapon. Personnel conducting training with rifles will come to sling arms or

a controlled carry when personnel move forward of the firing line and will face up range until directed to proceed with the course of fire.

c. A loaded rifle or pistol will not be passed to another person. However, range personnel or service instructors may take a loaded weapon from a shooter to demonstrate or to clear a misfire or stoppage.

d. Audible Pop. An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "Cease-Fire". Live-fire may resume only after the RSO has been informed and the weapon has been cleared.

e. Full auto fire is not authorized.

f. Corpsman and safety vehicle are required for all live fire training. Corpsman and a safety vehicle must be physically present on the range complex.

3. Planning Requirements. "F" Range is scheduled through RFMSS and approved by MCBH S-3. "F" Range availability is limited due to its routine use for annual rifle re-qualification training. This training is conducted from 0700-1700 daily, for approximately 32 weeks out of the year.

4. Access Control. All units must check-in with the Pu'uloa RTF Range Control (Building 401) prior to occupying the range.

5. Facilities

a. Water Spigots. There are water spigots and drinking fountains located under the covered firing line.

b. Heads. A co-use head (portable toilet) is located behind the covered firing line, on the left hand side of the range. Heads must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control.

c. Electrical Outlets. Electrical outlets are located center line, at the covered firing line sound tower.

d. Ammunition/Armorer Tables. There are ammunition and armorer tables located behind the covered firing line. They are designed to facilitate the sorting and distribution of ammunition, as well as a surface for armorers to conduct weapons repair and maintenance.

e. Parking. Parking is limited at the Pu'uloa RTF and the use of government transportation is highly encouraged. Parking is available behind the Pu'uloa transient quarters (Buildings 302 and 303). The overflow parking lot is located in front of the armory (Building 44) and MTU facility (Building 48).

RANGE 1 Kaneohe	
Type	Multipurpose Range
Target Distances	Unknown stationary and moving out to 500 yards, KD
Authorized Weapons	Shoulder-fired service and precision rifles up to 300WINMAG & 50 cal. Machine guns up to may be considered on a case-by-case basis
Authorized Munitions	.50 cal Ball (only) and below (sniper)
Firing Lines	100, 200, 300, 500
Firing Points	6 KD and 3 Towers
BOUNDARY LIMITATIONS	
Lateral Limits	West Grid: 04QFJ3162472769/MAG AZ LLL (4 deg) East Grid: 04QFJ3168972753/MAG AZ RLL (4 deg)
Close-Out List	Range 7, 8, 8A, 8B, 11 Restricts use of Range 5 to static firing at the firing line.

1. Description:

a. Range 1 is mainly an unknown distance urban firing range designed to support individual enhanced marksmanship training. Uses include static unknown distance firing from the towers for the employment of enhanced marksmanship techniques. Range 1 is equipped with (20) Stationary Infantry Targets and (13) Moving Infantry Targets at ranges from 75-500 yards that are controlled using a Toughbook. There are -6 KD firing lines target carriages in the pits.

b. Minimum OIC/RSO Requirements: OIC E-6/GS-07 and RSO E-5/GS-05.

c. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

2. Close-out list: The use of Range 1 closes Ranges 7, 8, 8A, 8B, 10 and 11 and restricts use of Range 5 to static firing at the firing line. When one of the ranges on the close-out list are scheduled for training, the other ranges cannot be occupied. Exceptions to this rule are co-uses approved by the Installation RCO, or in his absence, the Range Control Operations Officer. Requests to co-use must be accompanied with a SOM and RM worksheet. At no time will one unit be permitted to be inside of another unit's range SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons: Shoulder-fired service and precision rifles. Machine guns up to 7.62mm may be considered on a case-by-case basis. The SIT's and MIT's are hard to see from the ground, units will be limited to just a few targets. The towers are not designed for the M240 tripod. Cross firing from the R1 500, 300, 200 berms to the Impact Area for the TACFIRE range only.

b. Ammunition: Ball ammunition up to .50 cal. Fragmenting, explosive, and tracer projectiles are prohibited.

c. Targetry: Targets will be provided by Range Control. Target system is programmable (timing, number of hits, etc.) to assist the training unit in accomplishing a variety of tasks. Training units should make liaison with Range Control personnel to ensure that an appropriate scenario is programmed at least two weeks prior to the training event. Steel reactive targets may be utilized IAW MCO 3570. Units that desire target placed in the HH impact area require preapproval from Range Control, EOD, and medical support.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal / radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

3. Safety: In addition to general range safety procedures, the following requirements are specific for activities aboard Range 1:

a. Fire Control and Precautions

(1) Lateral limit markers are present on Range

(2) Individual shooters lateral limits are the left and right edge of their respective targets.

b. Cross range firing is authorized from the Tower 1 only. Towers 2 and 3 may only engage targets from the center of the range to the right lateral limit for 5.56mm rifles.

c. Firing from multiple levels of different towers at the same time is authorized provided that appropriate control measures are put in place by the training unit. Firing from multiple levels of the same tower is prohibited.

d. At no time will more than one Marine be on the ladders at any given time. Two Marines are authorized on the stairways.

e. Firing Line Supervision. The minimum level of supervision for the firing line aboard Range 1 is the OIC and RSO. Supervisory personnel cannot perform their duties and participate in firing simultaneously.

f. A requirement for two (2) beach guards to be posted at the coastline observation bunker is mandatory. Beach guards are to report to Range Control and will receive a safety brief. When unauthorized aircraft, vessels, or personnel enter the SDZ, the beach guards will report that to Range Control. Range Control will "check firing" until the SDZ is clear. During night live-fire training the beach guards MUST have night vision equipment. Units are responsible for ensuring beach guards have food and water. Range Control will provide transportation to/from the beach guard bunker and two-way communications with Range Control.

g. Corpsman and a safety vehicle are required for all live fire training; they must be physically present on the range complex.

6. Planning Requirements. Range 1 is scheduled through RFMSS and approved by MCBH S-3. Desired use of targetry requires prior coordination with Range Control. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

7. Access Control

a. All units must check in with the Range Control (Building 1584) prior to occupying the range.

b. Range 1 firing lines are positioned adjacent to Range 5. Therefore, both ranges have overlapping SDZs when in use. For this reason, strict supervision of personnel movement is necessary. All personnel entering and exiting the range must use the steps located behind the firing line or the access road entrance at the top of the hill. The road east of Range 1 (between Ranges 1 and 5) is off limits to all ground traffic unless authorized by Range Control. The use of this road for traffic to and from the downrange area requires Ranges 1 and 5 to be placed in "CHECK-FIRE".

8. Facilities

a. Water Spigots. There are water spigots for general use at the following locations:

- (1) Behind the 500 yard line on the left hand side of the range.

(2) At the Base of the "Head" facility behind the 500 yard line.

b. Heads. The heads associated with Range 1 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Separate male and female heads at the base of the range tower, behind the 500 yard line.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

KRTC RANGE 2	
Type	Known Distance Small Arms Range
Target Distances	50 yard maximum
Authorized Weapons	Rifles 5.56 A059 only Pistols .45 cal and below Shotguns 12 Gauge and below
Authorized Munitions	Rifles 5.56 A059 only Pistols .45 cal and below Shotguns 12 Gauge and below
Firing Lines	7, 15, 25, and 50 yards (yd)
Target Points	24
BOUNDARY LIMITATIONS	
Lateral Limits	50 yd W Grid: 04QFJ3163972708/MAG AZ LLL (184 deg) 50 yd E Grid: 04QFJ3166672699/MAG AZ RLL (184 deg) 25 yd W Grid: 04QFJ3163372690/MAG AZ LLL (184 deg) 25 yd E Grid: 04QFJ3165972681/MAG AZ RLL (184 deg)
Close-Out List	Range 2 does not close any other range.

1. Description:

a. Range 2 is a Known Distance range designed to support individual small arms training and qualification. It consists of 24 target points and four firing lines. Authorized training includes static small arms live-fire training engaging targets from 7, 15, 25, and 50 yards.

b. Minimum OIC/RSO Requirements: OIC E-6/GS-07 and RSO E-5/GS-05.

c. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

2. Close-out List: None

3. Weapons, Ammunition, and Targetry

a. Weapons: Service shotguns, pistols and rifles. Properly registered civilian shotguns, pistols and rifles may be fired up to the maximum allowable caliber during recreation firing only.

b. Ammunition: Up to 12 Gauge for shotgun, up to .45 cal for pistols and 5.56 for rifles. Fragmenting, explosive, and tracer projectiles are prohibited.

c. Target: Targets will be provided by Range Control. Range 2 is equipped with a 24 target point pneumatic turning target system. Authorized target for Range 2 are made from cardboard, plastic or plywood only. Paper refaces are authorized. Targets will be affixed to the turning mechanisms by wooden 2"x 2" only. Targets must be positioned above the target mechanism to ensure projectiles land within the designated bullet trap. No ricochet producing target materials (i.e., steel, nails, etc.) are authorized in target/target mount construction. For other than annual pistol or rifle

qualification, targets will be provided by the training unit, unless prior planning and coordination has been made with Range Control.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one (1) meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 2.

a. Fire Control and Precautions. Targets 1 and 24 are the respective left and right lateral limits of fire for Range 2. Individual shooters lateral limits are the left and right edge of their respective targets.

(1) 50 yd W Grid: 04QFJ3163972708/MAG AZ LLL (184 deg)

(2) 50 yd E Grid: 04QFJ3166672699/MAG AZ RLL (184 deg)

(3) 25 yd W Grid: 04QFJ3163372690/MAG AZ LLL (184 deg)

(4) 25 yd E Grid: 04QFJ3165972681/MAG AZ RLL (184 deg)

b. All weapons will be made safe and benched or holstered prior to anyone leaving the firing line or going forward of the firing line. When

personnel are forward of the firing line, no one will pick up a benched weapon, load a weapon, or conduct any dry firing. No one will be forward of the ready line while personnel are down range.

c. During slow fire, weapons may be benched, with the muzzle pointed downrange and the safety or de-cocking lever on "safe."

d. The safety or de-cocking lever will not be disengaged on the semi-automatic pistol or the hammer cocked on the revolver, until the targets begin to face.

e. Proper "show clear" transfers must be utilized if transferring weapons from one shooter to another.

f. Audible Pop: An "audible pop" may be defined as a peculiar sound or feeling that one believes a round did not fire the way it was intended and a projectile may still be present in the bore. Any shooter experiencing an "audible pop" will immediately "cease-fire" and inform a Coach or Block NCO. Live-fire may resume only after the RSO has been informed and an armorer has cleared the weapon.

g. The prone position is not authorized on this range. Shooting into the deck or range floor is prohibited, anything short of the impact media will result in an immediate range closure for that unit. The OIC and RSO are responsible for ensuring there are no short rounds, if a short round accrues, then the unit will go into a check fire and will report the incident to Range Control.

h. Corpsman and safety vehicle are required for all live fire training. The Corpsman and a safety vehicle must be physically present on the training complex at all times.

5. Planning Requirements. Range 2 is scheduled through RFMSS and approved by MCBH, S-3. Range 2 has limited availability due to its routine use for annual pistol qualification and training. Desired use of targetry requires prior coordination with Range Control.

a. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

6. Access Control

a. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Water Spigots. There are water spigots for general use at the following locations:

(1) At the main entrance to the 50-yard line.

(2) At the base of the "Head" facility behind the Range 1 500-yard line.

(3) At the center of the line, outside the 50-yard line enclosure.

b. Heads. The heads associated with Range 2 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Heads are located on Range 4.

c. Electrical Outlets. There are 110-volt electrical outlets for general use at the center on the line (50-yard line) and the target shed.

d. Ammunition/Armorer Tables. There are ammunition and armorer tables located at the 50-yard line. They are designed to facilitate the sorting and distribution of ammunition as well as to allow for a surface for armorers to conduct weapons repair and maintenance.

e. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 3 Kaneohe	
Type	360 degree, Zero SDZ live-fire shoot house
Target Distances	N/A
Authorized Weapons	All pistols, All shotguns, All machine guns
Authorized Munitions	All pistol calibers 5.56mm and below rifle/machinegun calibers All shotgun calibers Explosive charges no larger than 0.5lbs NEW SESAMS/UTM/CCMCK
Firing Lines	N/A
Target Points	N/A
BOUNDARY LIMITATIONS	
Lateral Limits	N/A. Range 3 is self-contained.
Close-Out List	Range 3 does not close any other range.

1. Description: Range 3 is a 360 degree, Zero SDZ, live-fire shoot house. It consists of two stories, nine live-fire rooms, two hallways, two ladder wells, and a single explosive breaching entry location. It is used for conducting CQB/CQM blank and live-fire training.

a. Minimum OIC/RSO Requirements: OIC E-7 (E-6 SESAMS/BLANKS) and RSO E-6.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

2. Close-out List: None

3. Weapons, Ammunition, and Targetry

a. Weapons: All pistols, shotguns, and rifles/automatic rifles 5.56mm and below. Practice and concussion grenades are authorized for training. Shot cards demonstrating 0.5lbs NEW are required for training at the breaching wall.

b. Ammunition: 5.56mm and below rifle cartridges, all pistol calibers and all shotgun shells. Fragmenting, explosive, and tracer projectiles are prohibited. Smoke, CS, Illumination, and WP grenades are prohibited. Smoke grenades may be used outside the shoot house within the Range 3 bay with approval from Range Control.

c. Target: Targets will be provided by Range Control. The RTF Staff or RSI will inspect and approve the target placement before conducting live-fire with small arms. Once the target location has been approved, targets will NOT be moved without approval from Range Control. At no time will ricochet producing materials be used for targetry in the shoot house (i.e., engineer stakes, steel reactive targets, etc.)

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of

fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. If it is determined that projectile impacts to the chassis cannot be avoided during the risk mitigation process, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 3.

a. Fire Control and Precautions

(1) Marines using the shoot house will have qualified on Table 5 for Day Operations and Table 6 for Night Operations within the appropriate qualification year.

(2) The individual's left, right, and vertical limits will be the thoracic cavity (10 inch circle), the pelvic girdle, or a head shot for each target engagement. Failure for Marines to maintain 80% accuracy in shot placement will be considered unsafe. The left and right lateral limits for the team will be six feet from the muzzle of the deepest shooter to the left or right.

(3) At no time will targets be placed in front of any red painted areas. All target placement is limited to locations with a white wall as a backstop.

(4) Every effort will be made to ensure that target placement allows the shooter to clearly engage the target while preventing other shooters from engagement.

(5) Targets will not be placed in areas where a high probability exists that a shooter will violate the six-foot rule.

(6) The vertical limit (ceiling) will be the painted red line.

(7) The OIC, RSO, or PSO will move with the personnel being trained and will ensure all shooters are positively controlled. All weapons safety rules and conditions will be supervised and enforced.

(8) Personnel not actively training in the shoot house will remain within the restricted/staging area located on Range 3 during all live-fire training.

(9) At no time will more than one fire team (four Marines) be used per room and no more than one squad will be in the building at a time. The shoot house maximum occupancy is sixteen (16).

(10) The OIC/RSO will ensure all personnel are familiar with firing lanes, firing points, sectors of fire, limits of fire, dispersion between shooters, grenade safety procedures, battle drills, and clearing drills.

(11) All live-fire will be conducted within the shoot house.

(12) Breaching charges on the outside breaching wall are limited to a maximum of 0.5lbs Net Explosive Weight. 1/4" plywood for breaching will be provided by Range Control. OIC/RSO will ensure all personnel are behind the wall and red safety line prior to detonation. Time fuze tests will be conducted to ensure prior delay. Shot cards must be provided to Range Control for approval.

(13) Every effort will be made to ensure that all breaching charges are dual-primed.

(14) Training units are not authorized to add any material, such as furniture, to the inside of this training building.

(15) A non-firing Corpsman, Medic, or EMT and a safety vehicle are required at the staging area located on Range 3 during all training.

(16) Units must conduct rehearsals and dry runs in the live-fire building before going "Hot."

b. This building is authorized for night training with approved weapons systems and night vision devices.

c. All safety personnel WILL HAVE NIGHT VISION DEVICES during all night training.

d. While training is being conducted all personnel (including all instructors/PSO's) MUST wear helmets, flak jackets, eye protection, and hearing protection.

e. Blanks and live ammunition will not be issued from the same ammunition point.

f. All weapons will be properly cleared before transitioning from blank to live-fire.

g. A two (2) minute air refresh time will be conducted every run through or drill. The "shoot house refresh" consists of physically opening every door of the shoot house and suspending training for two minutes. The OIC/RSO will then ensure all applicable doors are secured and the shoot house is clear of all personnel prior to the next drill/run.

5. Planning Requirements. Range 3 is scheduled through RFMSS and approved by MCBH S-3. Certain specific criteria must be met in order to use Range 3. A range "walk" must be conducted at least FIVE working days prior to training. An SOM, LOI, and RM and concept of operations brief must be submitted to the Range Control Operations Officer for approval at least 14 working days prior to training. Ensure the concept of operations covers a detailed scenario that includes: rooms, RTA equipment, weapons, ammunition, control measures, rehearsal plan, target locations, and a breakdown of activity through the course of training (arrival, repair, police call, departure, etc.) A final "walk" through may be required on the day prior to training depending on any adjustments, amendments, or additional coordination required. The OIC of the range must have reviewed the final SOM/concept of operations and have attended the walk through in order to use Range 3. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. The heads associated with Range 3 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Separate male and female heads are located at the base of the range tower, behind the Range 1 500-yard line.

b. Water Spigots. There are water spigots for general use on the range complex.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 4 Kaneohe	
Type	Bivouac SWA Hut Training Aids
Target Distances	N/A
Authorized Weapons	N/A
Authorized Munitions	N/A
Firing Lines	N/A
Target Points	N/A
BOUNDARY LIMITATIONS	
Lateral Limits	N/A
Close-Out List	Range 4 does not close any other range.

1. Description. Range 4 is a bivouac area with six SWA huts and an outdoor classroom consisting of bleachers. Authorized training includes bivouacking, outdoor periods of instruction, briefing and staging of materials.

a. Minimum OIC/RSO Requirements: OIC E-6 and RSO E-5.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

2. Close-out List. None.

3. Weapons, Ammunition, and Target

a. No weapons will be authorized to use on this range.

b. No ammunition will be authorized to use on this range.

c. No targets will be authorized to use on this range.

4. Safety. In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 4.

a. Fire Control and Precautions

(1) At no time will there be ANY SMOKING inside the bivouac SWA huts.

(2) No open flames or cooking of any kind.

(3) Fire extinguishers are located on the left side of the hatch, at the front entrance point of each SWA huts.

(4) Units will not run any type of electricity to these training devices. No generators, no extension cords, etc.

b. Training units are not authorized to add, modify or take away any material, such as furniture or screens and window covers to the SWA huts. No modifications will be made to any building or structure.

c. All weapons will be properly cleared before entering into R4 bivouac SWA huts.

d. In case of emergency, all occupants of R4 bivouac SWA huts will muster on the R5 berm.

e. Occupancy of a single SWA hut is limited to 30 personnel.

f. No ammunition will be stored in SWA huts, except during weather emergencies while awaiting pick up and ASP return. Only when approved by Range Control.

5. Planning Requirements. Range 4 is scheduled through RFMSS and approved by MCBH S-3. Certain specific criteria must be met in order to use Range 4. Units may request either three or six SWA huts. This should be detailed in the Communications tab in RFMSS.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. The heads associated with Range 4 are the portable toilets on the north end of the range. These will be kept free of all trash and refuse at all times. RSOs will ensure all heads are policed before range is turned back over to Range Control. Separate male and female heads are located at the base of the range tower, behind the Range 1 500-yard line.

b. Water Spigots. There are water spigots for general use at the Base of the "Head" facility behind the Range 1 500-yard line.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 5 Kaneohe	
Type	Multi-Purpose Live Fire and Maneuver Range
Target Distances	This is an unknown distance range
Authorized Weapons	All small arms, automatic rifles, and machine guns 40mm and below Antitank/shoulder-fired rockets
Authorized Munitions	40mm TP/HE/HEDP .50 caliber Ball and Below SMAW TP (spotting rounds NOT authorized) M72AS LAAW MAAWS AT4 SRTA
Firing Lanes	N/A
Firing Line	West Grid: 04QFJ3176172740 East Grid: 04QFJ3183472678
BOUNDARY LIMITATIONS	
Lateral Limits	All fires and effects from fires directed at impact area targets must be aimed to fall within the white and black striped lateral limit markers. (HE rounds must impact on the HE finger-also noted by lateral limit markers). Fires directed at targets within Range 5 boundary must be in compliance with the SDZs for that activity.
Close-Out List	Range 5 closes Ranges 7, 8, 8A, 8B, and 9. May close out Range 1 and 9A based on specific firing scenarios. Closes Range 6 when firing 40MM HEDP from the firing line.

1. Description: Range 5 is a multi-purpose live-fire and maneuver range which supports unknown distance firing, vehicle-mounted weapons, amphibious assault vehicles, and weapons marksmanship training up to 40mm machine guns.

a. Minimum OIC/RSO Requirements:

- (1) STATIC FIRE (Small Arms .50 caliber and below)
OIC E-6
RSO E-5
- (2) STATIC FIRE (Rockets (HE and practice))
OIC E-7
RSO E-6
- (3) LIVE FIRE AND MANEUVER
OIC E-7
RSO E-6

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 5 closes Ranges 7, 8, 8A, 8B, and 9, may close out Range 1 and 9A based on specific firing scenario and closes Range 6 when firing 40MM HEDP from the firing line.

3. Weapons, Ammunition, and Targetry

a. Weapons: All pistols, shotguns, and rifles/automatic rifles .50 caliber and below. All machine guns 40mm and below.

b. Ammunition: .50 caliber and below rifle cartridges and all pistol calibers .45 caliber and below. All machine guns 40MM and below. SMAW, LAW, MAAWS and AT-4 rockets (to HE finger only). Tracer and incendiary projectiles of any kind are prohibited. Smoke grenades may be used with prior approval.

c. Targetry: Targets for common use training will be provided by Range Control. Range 5 consists of 50 pop-up style Stationary Infantry Targets (SITs) operated from a ToughBook that is signed out to the training unit. Units are encouraged to request through your RFMSS request and send a representative to receive training on the ToughBook prior to the date of the training event. If additional targetry or steel targets are emplaced, Staff/RSI will inspect and approve the target placement before conducting live-fire with small arms. Once the target locations have been approved, targets will NOT be moved without approval from Range Control. Steel reactive target may be utilized IAW MCO 3570 when approved by Range Control.

d. Trackless Mobile Infantry Targets (TMIT). TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs)/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one (1) meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m

for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety. In addition to general Range Safety Procedures, the following requirements are specific for activities aboard Range 5:

a. When engaging steel targets the minimum target engagement distances are: 7 yards when firing pistols, 10 yards when firing 00 buckshot, 50 yards when firing 12 gauge slugs, and 100 meters when firing 5.56mm and above IAW SOUM 2-02 and MCO p3570.1C.

b. General firing precautions for MK-19 40mm machine gun. Targets will be engaged at ranges greater than 75 meters when firing 40mm TP rounds. Targets will be set up and engaged only at ranges specified during the Range Control Staff's Pre-fire inspection when firing 40mm HE/HEDP. Personnel within a 310 meter radius of round impact will wear protective helmet, body armor/flak jacket, and ballistic eye protection at all times.

c. All heavy machine guns (ground and/or vehicle mounted) require a Traversing and Elevation (T&E) mechanism to control horizontal and vertical trajectory limits. Firing from vehicles will only be allowed from authorized positions on the range.

d. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

e. The lateral limit signs located within the impact area are there to provide a visual reference when engaging targets within the impact area from firing points on Range 5. They are marked with yellow/black striped signs. Signs are located in the impact area forming a quadrilateral in which all impact and effects from impacts must be contained. When engaging targets located within the Range 5 boundary, the SDZ is referenced for containment. At no time should the fires or effects of fires be aimed so that they will impact within the wildlife management area (Booby colony) or water cannons.

f. RSOs are responsible for monitoring the dud rate and rounds misfired by lot number when firing 40mm HE/HEDP. If the lot number's dud or misfire rate exceeds five percent during training, units will immediately cease fire and contact Range Control.

g. When units conduct exercises that include live-fire and maneuver, the OIC/RSO must ensure that the appropriate safety personnel are dedicated to each maneuver or support element (i.e., machine gun Support by Fire position). Ensure individuals/elements do not flag each other when executing maneuver and movements are conducted IAW the approved maneuver scenario.

h. A requirement for two beach guards to be posted at the coastline observation bunker is mandatory. Beach guards are to report to Range Control

and will receive a safety brief. When unauthorized aircraft, vessels, or personnel enter the SDZ, the beach guards will report that to Range Control. Range Control will "check firing" until the SDZ is clear. During night live-fire training, beach guards must have night vision equipment. Units are responsible for ensuring beach guards have chow and water. Range Control will provide radios and transportation to and from the beach guard bunker.

i. Corpsman and safety vehicle are required for all live fire training. The Corpsman and a safety vehicle must be physically present on the training complex at all times.

5. Planning Requirements. Range 5 is scheduled through RFMSS and approved by MCBH, S-3. Certain specific criteria must be met in order to use Range 5. For live-fire and maneuver training or firing HE munitions, a SOM/LOI/RM and concept of operations brief must be submitted to the Range Control Operations Officer for approval at least 14 working days prior to training. Ensure the SOM includes a graphic that includes SBF location and tactical control measures (shift/cease fires, etc.). Ensure the concept of operations covers a detailed scenario that includes: weapons, ammunition, control measures, safety personnel, rehearsal plan, targetry locations, and a breakdown of activity through the course of training (arrival, repair, police call, departure, etc.) A final "walk" through may be required on the day prior to training depending on any adjustments, amendments, or additional coordination required. The OIC of the range must have reviewed the final SOM/concept of operations and have attended the walk through in order to use Range 5. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. The heads associated with Range 5 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Portable toilets for co-use are located on Range 4. Separate male and female heads are located behind the Range 1 500-yard line.

b. Water Spigots. There are water spigots for general use at the base of the "Head" facility behind the Range 1 500 yard line. Building 1540 is off limits.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 6 Kaneohe	
Type	Known Distance Small Arms Range
Target Distances	50 yards maximum
Authorized Weapons	Rifles 7.62mm and below Pistols .45 cal and below Shotguns 12 Gauge and below
Authorized Munitions	Rifles 7.62mm and below Pistols .45 cal and below Shotguns 12 Gauge and below
Firing Lines	7, 15, 25, 50 yards
Target Points	25
BOUNDARY LIMITATIONS	
Lateral Limits	50 yd N Grid: 04QFJ3189472669 50 yd S Grid: 04QFJ3188472645 25 yd N Grid: 04QFJ3191472662 25 yd S Grid: 04QFJ3190372638 15 yd N Grid: 04QFJ3192372658 15 yd S Grid: 04QFJ3191272634
Close-Out List	Range 6 does not close any other range. Range 9A

1. Description: Range 6 is a "square bay" range designed to support individual small arms training and qualification. It consists of 25 target points and five firing lines. Authorized training includes static small arms rifle, pistol, and shotgun live-fire training engaging targets from 3, 5, 15, 25, and 50 yards.

a. Minimum OIC/RSO Requirements: OIC E-6/GS-07 RSO E-5/GS-05.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

2. Close-out List: Range 9A.

3. Weapons, Ammunition, and Targets:

a. Weapons. All rifles 7.62mm and below, all pistols .45 caliber and below, and all shotguns 12 gauge and below.

b. Ammunition: 7.62mm/12 gauge/.45 caliber and below only. Fragmenting, explosive, and tracer projectiles are prohibited.

c. Targetry. Targets will be provided by Range Control. Range 6 is equipped with a 25 target point pneumatic turning target system. Authorized targetry for Range 6 are targets made from cardboard, plastic and steel. Targets must be positioned above the target mechanism to ensure projectiles land within the designated bullet trap. No ricochet producing target materials (i.e., steel, nails, etc.) are authorized in target mount construction.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which

engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. If it is determined that projectile impacts to the chassis cannot be avoided during the risk mitigation process, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to general Range Safety Procedures, the following requirements are specific for activities aboard Range 6:

a. When engaging steel targets the minimum target engagement distances are: 7 yards when firing pistols, 10 yards when firing 00 buckshot, 50 yards when firing 12 gauge slugs, and 100 meters when firing 5.56mm and above IAW SOUM 2-02 and MCO 3570.1C.

b. The lateral limits for the range are targets one (1) and twenty-five (25) respectively. Individual shooters lateral limits are the left and right edge of their respective targets only.

c. No firing is authorized from the tower berm or side berms.

d. One (1) beach guard is required for Range 6 and will be posted on the ladder well adjacent to the Range Tower door or inside the Range Tower. If conducting night firing, the beach guard must use night vision equipment.

e. Ensure that the range flag/warning light is hoisted and/or working on the flagpole, as depicted on the range diagram.

f. Targets will be provided by Range Control. If training unit desires to use a target Range Control does not stock, they may provide their own, provided it is safe to use.

g. Corpsman and safety vehicle are required for all live fire training. The Corpsman and a safety vehicle must be physically present on the training complex at all times.

5. Planning Requirements. Range 6 is scheduled through RFMSS and approved by MCBH S-3. Range 6 availability is limited due to its routine use for FBI and DEA training.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. The heads associated with Range 6 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Portable toilets for co-use are located near the front gate entrances.

b. Water Spigots. There are water spigots for general use at the following locations:

(1) Behind the 50-yard line, center of the line.

(2) In the target pit area, left hand side of the range.

c. Electrical Outlets. There are 110-volt electrical outlets for general use at the tower, behind the 50-yard line.

d. Speakers. Range speakers are mounted on the tower and can be used for clear communication on the firing line. A separate radio and coordination with Range control is required for their use. Is this for FBI use only?

e. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 7 Kaneohe	
Type	Static Field-Firing Range
Target Distances	N/A
Authorized Weapons	All small arms, automatic rifles, and Machine Guns 40mm and below Antitank/shoulder fired rockets
Authorized Munitions	40mm HE/HEDP (M203/M32 only) 40mm TP .50 caliber ball and below SMAW HE/TP (use of spotting rounds NOT authorized) M72AS LAAW M136 HE AT-4 M-3 MAAWS 84mm (Carl Gustaf)
Firing Lines	1 (04QFJ3199893007-04QFJ3203072961)
Target Points	Target 1 04QFJ3226873178 Target 2 04QFJ3225473145 Target 3 04QFJ3224973128
Close-Out List	Range 7 closes Ranges 5, 8, 8A, 8B, 9, and 9A. Range 7 restricts Range 1 from firing certain scenarios.

1. Description: Range 7 is designed to support small arms, crew-served machine guns, shoulder-fired anti-armor rockets, and vehicle-mounted live-fire training requirements. It consists of one firing line located on the berm, downrange of Range 5.

a. Minimum OIC/RSO Requirements:

- (1) STATIC FIRE (Small Arms .50 caliber and below)
OIC E-6
RSO E-5
- (2) STATIC FIRE (Rockets (HE and practice))
OIC E-7
RSO E-6

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 7 closes Ranges 5, 8, 8A, 8B, 9, and 9A. Range 7 restricts Range 1 from firing certain scenarios. When one of the ranges on the close-out list are scheduled for training, the other ranges cannot be occupied. Exceptions to this rule are co-uses approved by the RCO or the Range Control Operations Officer in his or her absence. Requests to co-use Ranges 5, 7, and 9 must be accompanied with a SOM and RM worksheet. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons. All small arms, automatic rifles, and Machine Guns 40mm and below, Antitank or shoulder fired rockets.

b. Ammunition. 40mm HE/HEDP (M203/M32 only), 40mm TP, .50 caliber ball and below, SMAW HE/TP (use of spotting rounds NOT authorized), M72AS LAAW, M136 HE AT-4. MAAWS (Carl Gustav). Tracer projectiles are prohibited.

c. Targetry

(1) Small arms targetry will be provided by Range Control.

(2) When engaging steel targets the minimum target engagement distances are: 7 yards when firing pistols, 10 yards when firing 00 buckshot, 50 yards when firing 12 gauge slugs, and 100 meters when firing 5.56mm and above IAW SOUM 2-02 and MCO P3570.1C.

(3) All heavy machine guns (ground or vehicle mounted) require a T&E mechanism to control horizontal and vertical trajectory limits.

(4) The HE finger is the only authorized impact area for all HE anti-armor rockets.

(5) RSOs are responsible for monitoring the rounds misfired by lot number when firing anti-armor rockets.

(6) In the event of a dud round, the RSO will note its approximate location and notify Range Control when training is complete.

(7) Misfires will be handled IAW current TM, current publications and references, and unit SOP.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the

operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. If it is determined that projectile impacts to the chassis cannot be avoided during the risk mitigation process, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety. In addition to general range safety procedures, the following requirements are specific for activities aboard Range 7:

a. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

b. The lateral limits for this range are marked with yellow/black striped (zebra) signs located in the impact area. Individual shooters lateral limits are the left and right sides of the intended target.

c. RSOs are responsible for monitoring the dud rate or rounds misfired by lot number when firing 40mm HE/HEDP. If lot number's dud or misfire rate exceeds five percent during training, units will immediately cease fire and contact Range Control.

d. A requirement for two beach guards to be posted at the coastline observation bunker is mandatory. Beach guards are to report to Range Control and will receive a safety brief. During night live-fire training beach guards must have night vision equipment. Units are responsible for ensuring that beach guards have chow and water. Range Control will provide transportation and communication to and from the beach guard bunker.

e. Range 7 has a separate flag pole that must be raised in position during live-fire and then lowered upon completion of firing. It is located on the left hand side of Range 7 near the Range 1 pit access road.

f. Corpsman and safety vehicle are required for all live fire training. The Corpsman and a safety vehicle must be physically present on the training complex at all times.

5. Planning Requirements

a. Range 7 is scheduled through RFMSS and approved by MCBH, S-3. Certain specific criteria must be met in order to use HE.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

c. Two days prior to firing HE munitions on Range 7, a SOM/RM worksheet must be submitted and approved by the RCO or the Range Control Operations Officer. Ensure the SOM includes a graphic that includes control measures, rehearsal plan, additional targets required, and their proposed location.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. The heads associated with Range 7 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Range 7 heads are located behind Range 5 located on Range 4.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 8 Kaneohe	
Type	Light Demolitions Range
Target Distances	N/A
Authorized Weapons	M18 Claymore Mine Anti-Personnel Obstacle Breaching System (APOBS) Demolitions Charges
Authorized Munitions	Various, not to exceed 10.2 lbs. NEW
Firing Lines	N/A
Target Points	25
Close-Out List	Range 8 closes Ranges 5, 7, 8A, 8B, 9, 9A, and 10

1. Description: Range 8 is a light demolitions range located in a draw below the HE finger on Kaneohe Bay RTF. Authorized training includes demolitions and obstacle breaching.

a. Minimum OIC/RSO Requirements: OIC E-7 and RSO E-6.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 8 closes Ranges 5, 7, 8A, 8B, 9, 9A, and 10. When one of the ranges on the close-out list are scheduled for training the other ranges cannot be in a "HOT" status. At no time will a unit be permitted to be inside another range's SDZ.

3. Weapons, Ammunition, and Target: Explosive danger zone (EDZ) too will be utilized to create EDZs for demolitions training. Directional shots can up to 12 Net Explosive Weight (NEW) can be contained within the range boundary. If the EDZ tool shows the containment of the blast and fragmentation effects, the training shall be approved. Steel, timber, and concrete are authorized demolitions targets directional shots only. Omni directional charges Range 8 will NOT exceed five pounds NEW of TNT, C-4, or HME and on bare shots only. Claymore mines can be fired from the demolition pit area of Range 8. Ensure that the front portion of the claymore mine is facing toward the impact area when set in position. Waivers to this policy should be submitted not later than 30 days from training execution.

a. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. If it is determined that projectile impacts to the chassis cannot be avoided during the risk mitigation process, then the Range Safety Officer must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety. In addition to general range safety procedures, the following requirements are specific for activities aboard Range 8:

a. Unit leaders must ensure all applicable Training and Readiness (T&R) tasks are followed during the conduct of training. Units are required to have on hand, and adhere to, the appropriate T&R tasks, and TM for employing and troubleshooting the APOBS.

b. All personnel will wear approved eye protection, hearing protection, flak jackets, and helmets while the range is in a "HOT" status.

c. Only command certified demolition OICs and RSOs will be permitted to conduct demolition training operations.

d. In the event of a misfire, notify Range Control. OIC/RSO will personally clear the misfire. Misfire procedures can be found in MCO 3570.1_ and MCRP 3-17.7L. In the event that the OIC/RSO is unable to clear the misfire, Range Control will notify EOD. The range will remain in a "HOT" status and no one except EOD will be permitted down range until the misfire has been cleared. Live-fire training may resume upon notification from Range Control.

e. When demolitions are prepared, allow sufficient time for all personnel to leave the demolitions pit area and get into the safety area before detonation.

f. The safety area is designated as the "up range" side of the Range 9 berm and completely out of the line-of-sight of demolitions. Before setting demolitions, the area will be checked by the RSO for any debris that could be thrown by a detonation. When using time fuses, enough time fuse to ensure a five-minute (minimum) delay will be used before detonation. Once all charges have been primed, the RSO shall give the command to pull the igniters allowing at least ten seconds between them to allow an accurate count of the

number of shots fired. Once charges have been detonated, the RSO shall ensure that all of the charges have detonated before allowing personnel back into the demolitions area.

g. Corpsman and safety vehicle are required for demolitions training. Corpsman and a safety vehicle must be physically present in the training area at all times.

5. APOBS Specific Fire Control

a. Before firing the OIC will:

(1) Ensure that the entire SDZ is clear of all non-essential personnel or hazardous obstacles, in coordination with Range Control.

(2) Maintain radio communications with Range Control throughout the entire preparation and conduct of training.

(3) Have on hand and adhere to, appropriate TM and checklists for employing and troubleshooting the APOBS.

(4) Assign an RSO to supervise all actions regarding the handling and employment of the APOBS.

(5) Ensure all personnel involved in the training are wearing a helmet, flak jacket, and approved eye and hearing protection.

(6) Cease use of all electronic transmitting devices in the general area (such as radios and cell phones) prior to connecting sensitive elements of the system.

(7) Move all personnel, vehicles, and equipment not physically involved with the employment of the system to positions providing cover from flying debris (such as behind the Range 9 berm).

b. During firing the OIC will:

(1) Ensure firing personnel are at least 50 meters to the rear of the launch site and are in a prone or covered position.

(2) Maintain visual contact with the RSO and radio contact with Range Control.

(3) Maintain the ability to halt the training in the event any unsafe condition occurs.

(4) Handle misfires and early detonations IAW procedures outlined in the TM.

c. After firing the OIC will:

(1) Ensure EOD has swept the detonation area so that no unexploded residue from the system is evident.

(2) Ensure entire area is policed, including remnants of target obstacle.

6. Homemade Explosives (HME)

a. Training with HME to meet T&R standards will be only be authorized for personnel with Military Occupational Specialties of 2305 and 2336 in the grades of Sergeant (E-5) through Lieutenant Colonel (O-5).

b. HME must not exceed the allowable NEW of 10.2 pounds.

c. Personal protective equipment level will be dictated by reference (g).

d. RM process will be per reference (c).

e. Segregation of hazardous materials (hazard classes 1-8) during transportation and storage will be per 49 CFR Part 172.101 and Part 177.848.

f. Mixed and/or cured precursors shall not be stored with hazardous materials, regardless of class/division.

g. The range OIC and RSO qualifications are contained in reference (g).

7. Planning Requirements

a. Range 8 is scheduled through RFMSS and approved by MCBH S-3. Certain criteria must be met in order to use any type of demolitions.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

c. OICs will submit a "shot report" containing the size and composition of each explosive charge to the RCO NLT 14 days prior to the training event. A SOM and RM must be submitted to the RCO or in his absence, the Range Control Operations Officer. Ensure the SOM includes a graphic that includes control measures, rehearsal plan, additional targets required, and their proposed locations.

7. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

8. Facilities

a. Heads. The Range 8 heads are portable toilets located near the front gate.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 8A Kaneohe	
Type	Live-Fire Shoot House
Target Distances	N/A
Authorized Weapons	All pistols All shotguns All rifles (LMG included) 5.56mm and below
Authorized Munitions	5.56mm and below rifle cartridges All pistol calibers All shotgun shells M67 fragmentation grenades
Firing Lines	N/A
Target Points	N/A
Close-Out List	Range 8A closes Ranges 5, 7, 8, 8B, 9, 9A, and 10.

1. Description. Range 8A is a shoot house constructed of Shock Absorbing Concrete (SACON). It consists of two live-fire rooms, one hallway, and one large grenade room. There is no ceiling and the shoot house is NOT authorized for Zero SDZ, 360 degree live-fire. Shoot/no shoot areas are clearly marked.

a. Minimum OIC/RSO Requirements: OIC E-7 and RSO E-6.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List. Range 8A closes Ranges 5, 8, 8B, 9, 9A and 10. When one of the ranges on the close-out list is scheduled for training the other ranges cannot be occupied. Units are encouraged to incorporate range 8A into LFAM range scenarios conducted on range 5. At no time will one unit be permitted to be inside of another range's SDZ3.

3. Weapons, Ammunition, and Targetry

a. Weapons. All pistols, all shotguns, and all rifles (LMG included) 5.56mm and below.

b. Ammunition. 5.56mm and below rifle cartridges, all pistol calibers, all shotgun shells, and M67 fragmentation grenades. No tracers or incendiary will be authorized. Smoke grenades, WP grenades, illumination grenades, and CS grenades are not authorized.

c. Targetry. All targets will be provided by Range Control. The Range Staff or RSI will inspect and approve the target placement before conducting live-fire with small arms and/or live grenades. Targets will be shifted occasionally to avoid excessive damage to any one building panel. At no time will ricochet producing materials be used for target in the shoot house (i.e., engineer stakes or steel reactive targets).

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programmed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal / radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one (1) meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety. In addition to general range safety procedures, the following requirements are specific for activities aboard Range 8A:

a. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

b. The RSO will move with the personnel being trained and will ensure all shooters are positively controlled. All weapons safety rules and conditions will be supervised and enforced.

c. Personnel not actively training in the shoot house will remain within the restricted/staging area located on Range 9 during all live-fire training.

d. The maximum number of personnel authorized to conduct live-fire training at one time is a four-man clearing team (one Fire Team). When conducting live grenade training, the clearing element and the RSO are the only authorized occupants of the entire SACON house.

e. The OIC/RSO will ensure all personnel are familiar with firing lanes, firing points, sectors of fire, limits of fire, dispersion between shooters, grenade safety procedures, battle drills, clearing drills, and emergency drills.

f. The primary direction of fire is on the designated walls and targets located inside the building only. NO LIVE-FIRE IS PERMITTED ON "NO SHOOT" WALLS OR ABOVE THE RED SAFETY LINE.

g. Special precautions must be taken with left and right handed grenade throwers from the different positions within the building.

h. If the shoot house is to be used in conjunction with another range (i.e., objective in SOM with Range 5) a requirement for two beach guards to be posted at the coastline observation bunker is mandatory. Beach guards are to report to Range Control and will receive a safety brief. During night live-fire training, beach guards must have night vision equipment. Units are responsible for ensuring that beach guards have chow and water. Range Control will provide transportation and communication to and from the beach guard bunker.

i. Training units are NOT authorized to add any material, such as furniture, to the inside of this training building.

j. EOD is NOT required to be physically present at the training site, but must be on standby.

k. Two rooms have been designated as non-grenade rooms, as displayed on the range handout.

l. Corpsman and safety vehicle are required HE munitions and LFAM. Corpsman and a safety vehicle must be physically present in the training area at all times.

m. Training units must conduct rehearsals with practice grenades during the mock-up and dry-run rehearsals in the live-fire building prior to going "HOT" with live grenades. The using unit must police up all practice grenades and debris before going "HOT" with live grenades.

n. All live hand grenades must be strictly controlled and accounted for during training.

o. The building is authorized for night use with small arms, flashlights, and night vision devices. Live hand grenades are authorized at night; however, if a dud hand grenade occurs after ending evening nautical twilight (EENT), all Range 8A training must cease and the house/area will be secured to prevent access. The following day at first light EOD may clear the dud. Only then may training occur.

p. All safety personnel WILL HAVE NIGHT VISION DEVICES during all night live-fire training.

q. While training is being conducted all personnel, to include instructors, must wear helmets, flak jackets, eye protection, and hearing protection.

r. All safety precautions for the M67 fragmentation grenade listed in FM 3-23.30/TM-1330-15/1 and the Diversionary Charge Mk-141 (DWBS) listed in the Safety of Use Memorandum (SOUM) 2-03/TM 60E-2-2-3B must be adhered to and supervised by the RSO/OIC.

s. Once the safety pin has been pulled, the grenade must immediately be thrown. No attempt will be made to reinsert the safety pin. Only one live grenade will be thrown inside the facility at a time. "COOKING OFF" OR "MILKING" A GRENADE IS NOT AUTHORIZED.

t. Marine will wait three seconds after the grenade detonates before entering the room in order to allow the smoke and dust to clear. If the room is still filled with smoke and dust, the unit should delay even longer to allow better visibility inside the room or building before entering.

u. In the event of a misfire/dud, call an immediate "CEASE FIRE" and notify Range Control. All personnel must remain in a safe position for five minutes, then exit the building with condition four weapons and move by the most direct route to the staging/safe area located on Range 9. No one will be exposed to the misfired or dud grenade. Range Control will notify EOD to clear the range before training can continue. The range will not be used or occupied until notified by Range Control.

v. The using unit is required to fill in holes, rake down and level out the sandy areas inside the building, and remove all the debris from the building (i.e., spoons, clips, trash, dunnage, shotgun shells, brass, large pieces of hand grenades, etc.) before departing the range.

5. Planning Requirements

a. Range 8A is scheduled through RFMSS and approved by MCBH S-3.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

c. 14 days prior to firing HE munitions on Range 8A a SOM and RM worksheet must be submitted and approved by the RCO or the Range Control Operations Officer. Ensure the SOM covers a detailed scenario that includes movement in rooms, weapons, ammunition, control measures, rehearsal plan (to include emergency drills such as "dropped frag", safety procedures, and clearing drills), and additional targets required, and their proposed location.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. Range 8A does not have portable toilets located on the range. Closets heads are located on Range 9 or Range 4.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 8B Kaneohe	
Type	Live-Fire Pointman's Reaction Course
Target Distances	N/A
Authorized Weapons	All pistols All shotguns All rifles (LMG included) 5.56mm and below
Authorized Munitions	5.56mm and below rifle cartridges All pistol calibers All shotgun shells All blanks L594 Ground Burst Simulators with S-3 approval G930/G940/G945 smoke grenades with S-3 approval Battlefield Simulations (BFX) with S-3 approval
Firing Lines	N/A
Target Points	13
Close-Out List	Range 8B closes Ranges 5, 7, 8, 8A, 9, 9A, and 10.

1. Description: Range 8B is a live-fire point man reaction course that consists of a winding trail approximately 150 meters in length (300 meters total). The trail winds north to northwest through a lightly vegetated draw. The trail contains a series of partially concealed, pop-up style Stationary Infantry Targets (SITs) operated from a Toughbook that is signed out to the training unit. Units are encouraged to send a representative to receive training on the Toughbook prior to the date of the training event.

a. Minimum OIC/RSO Requirements: OIC E-7 RSO E-6.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 8B closes Ranges 5, 8, 8A, 9, 9A and 10. When one of the ranges on the close-out list is scheduled for training, the other ranges cannot be occupied. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons. All pistols, all shotguns, and all rifles (LMG included) 5.56mm and below.

b. Ammunition. 5.56mm and below rifle cartridges, all pistol calibers, all shotgun shells, all blanks, L594 Ground Burst Simulators with MCBH, S-3 approval, G930/G940/G945 smoke grenades with MCBH, S-3 approval, and Battlefield Simulations (BFX) with MCBH, S-3 approval. No tracers or incendiary ammunition will be fired on Range 8B.

c. Target: All targets will be provided by Range Control.

d. Target: Targets for common use training will be provided by Range Control. Range 8B consists of 13 pop-up style Stationary Infantry Targets (SITs) operated from a Toughbook that is signed out to the training unit. Units are encouraged to request through your RFMSS request and send a representative to receive training on the Toughbook prior to the date of the training event. If additional targets or steel targets are emplaced, Staff/RSI will inspect and approve the target placement before conducting live-fire with small arms. Once the target location has been approved, targets will NOT be moved without approval from Range Control. Steel reactive targets may be utilized IAW MCO 3570 when approved by Range Control.

e. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle offire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. If it is determined that projectile impacts to the chassis cannot be avoided during the risk mitigation process, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety. In addition to general Range Safety Procedures, the following requirements are specific for activities aboard Range 8B:

a. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

b. The RSO will move with the personnel being trained and will ensure all shooters are positively controlled. All weapons safety rules and conditions will be supervised and enforced.

c. Personnel not actively training on R-8B will remain within the restricted/staging area located behind the first firing point during all live-fire training.

d. The maximum number of personnel authorized to conduct live-fire training at one time is a four-man team (One Fire Team).

e. The OIC/RSO will ensure all personnel are familiar with firing lanes, firing points, sectors of fire, limits of fire, dispersion between shooters, grenade safety procedures, battle drills, clearing drills, and emergency drills.

f. The primary direction of fire will be towards the cluster of targets that are presented at each firing point. Due to the depth of the ravine and target placement (restricted to no higher than six feet from the ravine floor), firing will be conducted to the direct front with no lateral deviation.

g. Training units are NOT authorized to add any additional targets or target material to the course of fire without approval from Range Control.

h. Corpsman and safety vehicle are required HE munitions and LFAM. Corpsman and a safety vehicle must be physically present in the training area at all times.

i. Units must conduct rehearsals prior to commencing any live-fire training.

j. Corpsman and safety vehicle are required HE munitions and LFAM. Corpsman and a safety vehicle must be physically present in the training area at all times.

k. All safety personnel WILL HAVE NIGHT VISION DEVICES during all night live-fire training.

l. While training is being conducted, all personnel (including instructors) must wear helmets, flak jackets, eye protection, and hearing protection.

5. Planning Requirements

a. Range 8B is scheduled through RFMSS and approved by MCBH S-3. Specific criteria must be met in order to use Range 8B.

b. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

c. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance 30 days prior to training.

d. 14 days prior to training on Range 8B, a SOM and RM worksheet must be submitted and approved by the RCO or the Range Control Operations Officer. Ensure the SOM covers a detailed scenario that includes weapons, ammunition, control measures, rehearsal plan, repair and police of the range, and departure.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. Range 8B heads (portable toilets) are located at the front gate or at Range 4.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 9	
Type	Multi-purpose Small Arms Range
Target Distances	3-100 yards, 100m
Authorized Weapons	All pistols All shotguns Service rifles 7.62mm and below
Authorized Munitions	7.62mm and below rifle cartridges All pistol calibers .45 caliber and below All shotgun shells
Firing Lines	8
Target Points	24
BOUNDARY LIMITATIONS	
100-yard lateral limits	West Grid: 04WFJ3192672731/MAG AZ LLL (10 deg) East Grid: 04WFJ3195272720/MAG AZ RLL (10 deg)
50-yard lateral limits	West Grid: 04WFJ3189472672/MAG AZ LLL (10 deg) East Grid: 04WFJ3188272646/MAG AZ RLL (10 deg)
36-yard lateral limits	West Grid: 04WFJ3196172812/MAG AZ LLL (10 deg) East Grid: 04WFJ3198572799/MAG AZ RLL (10 deg)
15-yard lateral limits	West Grid: 04WFJ3196772827/MAG AZ LLL (10 deg) East Grid: 04WFJ3199372819/MAG AZ RLL (10 deg)
Close-Out List	Range 9 closes Ranges 5, 7, 8, 8A, 8B, 9A, and 10

1. Description: Range 9 is a live-fire training range for engaging targets from the 3, 5, 7, 15, 25, 36, 50, and 100 yards.

a. Minimum OIC/RSO Requirements: OIC E-6 and RSO E-5.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 9 closes Ranges 5, 7, 8, 8A, 8B, 9A, and 10. When one of the ranges on the close-out list is scheduled for training the other ranges cannot be occupied. Approval and coordination with units that have training previously scheduled on Ranges 5 and 7 and SOM and RM worksheet are required prior to RFMSS approval. These cases will only be approved when proven to be safe and are reviewed and approved by the Installation RCO, or the Range Control Operations Officer. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Target

a. Weapons: All pistols .45 caliber and below, all shotguns, and all rifles 7.62mm and below.

b. Ammunition: 7.62mm and below rifle cartridges, .45 caliber and below pistol calibers, and all shotgun shells are authorized. No tracers, explosives, or incendiary ammunition will be fired on Range 9.

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c. **Targetry:** All targets will be provided by Range Control. Range 9 is equipped with 24 pneumatic turning target system, 4 running target systems, and 18 reactive targets.

d. **Trackless Mobile Infantry Targets (TMIT):** TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one (1) meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. **Safety:** In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 9:

a. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

b. Targets 1 and 24 are the respective left and right lateral limits for Range 9.

c. Caution must be taken when engaging targets with steel penetrating 5.56mm. The steel plate protecting the targetry can be damaged by the steel penetrator in the projectile making ricochet and frag hazards possible. A SACON wall is protecting the steel plate. However, certain trajectories can still impact the protective plate.

d. Corpsman and safety vehicle are required HE munitions and LFAM. Corpsman and a safety vehicle must be physically present in the training area at all times.

5. Planning Requirements

a. Range 9 is scheduled through RFMSS and approved by MCBH, S-3.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. Range 9 head (portable toilet) are located at the front gate or on Range 4.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 9A	
Type	60mm Mortar Range
Target Distances	500 meters
Authorized Weapons	M224 60mm Mortar
Authorized Munitions	60mm HE and TP ammunition (No illumination or WP)
Firing Lines	N/A
Mortar Pits	3
BOUNDARY LIMITATIONS	
Mortar Pit #1	Grid: 04QFJ31897269 LLL (25 deg) RLL (32 deg) Min Range: 530m Max Range: 630m
Mortar Pit #2	Grid: 04QFJ31907268 LLL (24 deg) RLL (30 deg) Min Range: 530m Max Range: 630m
Mortar Pit #3	Grid: 04QFJ31917267 LLL (23 deg) RLL (29 deg) Min Range: 530m Max Range: 630m
Close-Out List	Range 9A closes Ranges 5, 7, 8, 8A, 8B, and 9

1. Description: Range 9A is a live-fire 60mm mortar training range with a maximum allowable charge of 1.

a. Minimum OIC/RSO Requirements: OIC E-6 and RSO E-6 (USMC only E-5).

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 9A closes Ranges 5, 7, 8, 8A, 8B, and 9. When one of the ranges on the close-out list is scheduled for training, the other ranges cannot be occupied. Approval by, and coordination with, units that have training previously scheduled on Ranges 5, 7, or 9, along with a SOM and RM worksheet is required prior to RFMSS approval. These cases will only be approved when proven to be safe and are reviewed and approved by the Installation RCO, or the Range Control Operations Officer. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons: M224 60mm Mortar.

b. Ammunition: 60mm HE and TP only.

c. Target: The three steel tank replica targets on the HE finger are the only authorized targets.

4. Safety: In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 9A:

a. The HE finger is the only authorized impact area. Units unable to consistently keep impacts within the target box on the HE finger will be required to cease training by the Range Control Operations Officer.

b. The M224 Mortar will be fired from the three mortar pits located at the rear of the range, adjacent to Range 6 (indicated by the yellow highlights on the range diagram).

c. RSOs are responsible for monitoring the dud rate or rounds misfired by lot number when firing mortars. If a lot number's dud rate or misfire rate exceeds five percent during training, units will immediately cease fire and contact Range Control.

d. In the event of a dud round the RSO will note its approximate location and notify Range Control when training is complete.

e. Misfires will be handled IAW current TMs, current publications, and references. A dud pit is located approximately 100m to the southeast of the mortar pit, identified by a large red "Dud Pit" sign.

f. EOD need not be physically present at the training site, but must be on standby.

g. Range 9A may be used to support live-fire and maneuver training on Range 5. The maneuver element must be clear of the mortar SDZ at all times.

h. If units are conducting life fire training exercises that include fire and movement/maneuver, OIC/RSO must ensure that there is the appropriate safety personnel dedicated to each movement/maneuver or support element (mortar/machine gun support by fire).

i. Corpsman and safety vehicle are required HE munitions and LFAM. Corpsman and a safety vehicle must be physically present in the training area at all times.

j. Excess mortar increments may be burned on Range 8 IAW MCO 3570.1C, current publications, and references. The RSO must call and report start and completion of powder burning operations. Range 8 must be scheduled to conduct powder burning operations. Report in writing the number and type of increments burned.

k. The following are required to be present for burning increments:

- (1) OIC/RSO
- (2) Corpsman, Medic, or EMT
- (3) Fire extinguisher
- (4) Two five-gallon water jugs
- (5) Shovels and rakes

3. Planning Requirements

a. Range 9A is scheduled through RFMSS and approved by MCBH S-3. Certain specific criteria must be met in order to use HE or Fire and Movement/Maneuver.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

c. 14 days prior to firing mortars on Range 9A, a SOM and RM worksheet must be submitted and approved by the RCO or the Range Control Operations Officer. Ensure the SOM covers a detailed scenario that includes information on the training to be conducted, weapons, ammunition, control measures, safety, and misfire procedures.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Heads. Range 9A heads (portable toilets) are located at the front gate or on Range 4.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 10	
Type	High-Angle, (Sniper) Live-fire Range
Target Distances	300-900 yards
Authorized Weapons	Shoulder-fired precision rifles (LMG or HMG case by case bases)
Authorized Munitions	.50 cal. and below
Firing Points	Grid 04QFJ3140273002
BOUNDARY LIMITATIONS	
Close-Out List	Closes Ranges 1, 5, 7, 8 series, 9, 9A and 11

1. Range 10 is designed to meet the training needs of precision and tactical marksmen, such as Scout Snipers, Law Enforcement and "Designated Marksmen". Authorized training includes static small arms live-fire training and engaging point and area targets from 300-900 yards within the Range 10 Target Area only, as defined by the range diagram. Static GPMG (7.62 and below) training may also be conducted from Range 10 with special approval from the IRCO.

a. Minimum OIC/RSO Requirements: OIC E-6 and RSO E-5.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Range 10 closes Ranges 1, 5, 7, 8, 8A, 8B, 9 and 11. When one of the ranges on the close-out list is scheduled for training, the other ranges cannot be occupied. Approval and coordination with units that have training previously scheduled on Ranges 1 and 5 and a SOM and RM worksheet are required prior to RFMSS approval. These cases will only be approved when proven to be safe and are reviewed and approved by the Installation RCO, or the Range Control Operations Officer. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Target

a. Weapons: All shoulder-fired precision rifles .50 caliber and below.

b. Ammunition: .50 caliber and below rifle cartridges. No tracers, explosives, or incendiary ammunition will be fired on Range 10.

c. Target: Targets will be provided by Range Control. If a unit wishes to emplace steel targets within the impact area, then it is the unit's responsibility to contact EOD and coordinate a date and time for escort. Ten day lead time is required to get EOD support.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programmed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process, if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to General Range Safety Procedures, the following requirements are specific for activities aboard Range 10:

a. Blank and live ammunition will not be utilized on ranges at the same time and must be stored and issued from two separate points. All blank ammunition must be turned in and accounted for prior to the conduct of live-fire.

b. The lateral limits for the range are marked with white and black striped (zebra) signs located in the impact area.

c. A Corpsman and safety vehicle are needed. Corpsman and a safety vehicle will be physically present in the training area at all times. The safety vehicle for range 10 will be posted at the trail head to Range 10.

5. Planning Requirements

a. Range 10 is scheduled through RFMSS and approved by MCBH, S-3.

b. For Ground Training System Support, add to your RFMSS RCNI request under the support tab.

c. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

6. Access Control

a. All units must check in with the Range Control (Building 1584) prior to occupying the range.

b. Ensure all movements up and down the hillside do not enter the area controlled by the Ammunition Supply Point (ASP) unless prearranged access has been coordinated.

7. Facilities

a. Heads. There are no facilities for use associated with Range 10.

b. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 11 M203/M27	
Type	Static Grenade Launcher Range
Target Distances	90-300 meters
Authorized Weapons	M203/M32
Authorized Munitions	40mm Training Practice Rounds only
Firing Lines	1
Target Points	4
BOUNDARY LIMITATIONS	
Firing Line	NW Grid: 04QFJ3158872908 SW Grid: 04QFJ3160972904
Close-Out List	Range 11 closes Ranges 1 and 10

1. Description: Range 11 is designed to support 40mm grenade launcher training requirements. It consists of one firing line on a berm above Range 1.

a. Minimum OIC/RSO Requirements: OIC E-7 and RSO E-6.

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 11 closes Ranges 1 and 10. When one of the ranges on the close-out list is scheduled for training, the other ranges cannot be occupied. Approval and coordination with units that have training previously scheduled on Ranges 1 and 10 and a SOM and RM worksheet is required prior to RFMSS approval. These cases will only be approved when proven to be safe and are reviewed and approved by the RCO, or the Range Control Operations Officer. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons: All grenade launchers 40mm and below.

b. Ammunition: Training Practice ammunition only.

c. Target: Targets will be provided by Range Control.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range.

RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to general range safety procedures, the following requirements are specific for activities aboard Range 11:

a. Training practice (TP) ammunition is the only authorized munitions.

b. The lateral limits for the range white/black striped (zebra) signs located in the impact area.

c. Misfires will be handled IAW current TM's, current publications, and references.

d. Range 11 has a separate flag pole that must be raised in position during live-fire and then lowered upon completion of firing. It is located on the right hand side of the Range 11 firing line near the bunker.

5. Planning Requirements

a. Range 11 is scheduled through RFMSS and approved by MCBH, S-3.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

a. Water Spigots. There are water spigots for general use at the following locations:

(1) Behind the 500 yard line on the left hand side of the Range 1.

(2) At the Base of the "Head" facility behind the 500 yard line on Range 1.

b. Heads. The heads associated with Range 11 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Separate male and female heads at the base of the range tower, behind the 500 yard line of Range 1.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.

RANGE 11 GRENADE	
Type	Hand Grenade Range (Practice and Live)
Target Distances	Out to 50 meters
Authorized Weapons	Fragmentation Grenades
Authorized Munitions	Hand held fragmentation grenades only
Firing Lines	1
Throwing Bays	1 live bay on Range 11, 1 practice bay behind Range 1
Target Points	N/A
BOUNDARY LIMITATIONS	
Firing Line	NW Grid: 04QFJ3158872908 SW Grid: 04QFJ3160972904
Close-Out List	Range 11 closes Ranges 1 and 10

1. Description: Range 11 Grenade is designed to support fragmentation hand grenade training requirements. It consists of a practice grenade bay behind Range 1, a staging area in defilade behind the firing line on Range 11, and two live grenade throwing bays. Units must have one OIC for Range 11 Grenade an RSO and a practice grenade range RSO when using the live and practice ranges concurrently.

a. Minimum OIC/RSO Requirements are: two OIC's and two RSO's, OIC E-7 (live), E-6 (practice) RSO E-6 (live), E-5 (practice)

b. Must have current MCBH OIC/RSO certification card, be current on MarineNet Range Safety course, be loaded into RFMSS, and be designated by the current unit on the Command Authorization Letter (signed by O-5 or above level commander).

c. OIC and RSO MUST be designated for the specified weapons systems.

2. Close-out List: Range 11 closes Ranges 1 and 10. When one of the ranges on the close-out list is scheduled for training, the other ranges cannot be occupied. Approval and coordination with units that have training previously scheduled on Ranges 1 and 10 and a SOM and RM worksheet are required prior to RFMSS approval. These cases will only be approved when proven to be safe and are reviewed and approved by the Installation RCO, or the Range Control Operations Officer. At no time will one unit be permitted to be inside of another range's SDZ.

3. Weapons, Ammunition, and Targetry

a. Weapons: Hand thrown fragmentation grenades.

b. Ammunition: M67 fragmentation grenades.

c. Targetry: Targets will be provided by Range Control.

d. Trackless Mobile Infantry Targets (TMIT): TMITs can be programed for engagements at pre-set locations but can also move in a random mode in which engagements are unpredictable. This unpredictability may generate angle of fire and ricochet concerns. As a result, the following are specific safety requirements for the use of these targets:

(1) The OIC of the exercise will verify with the target operator the established target maneuver box and associated engagement measures (e.g., lateral limits, minimum engagement distance, firing point/line/box) outlined in the SOP to ensure all fires remain within the lateral limits of the range. RSOs/Assistant RSOs will monitor gun target lines, impacts, and order an immediate ceasefire or check-fire in the case of unsafe conditions.

(2) Target operators will have positive control of all TMITs throughout the training event and maintain verbal/radio communication with the RSO.

(3) Target plans must be approved by the RCO.

(4) There are two recognized components to the TMIT. One component is the target portion and the other is the chassis that contains the operating system. The target portion of the TMIT will not be engaged any closer than one meter. The chassis of the TMIT is not considered the target and should not be engaged. During the risk mitigation process, if it is determined that projectile impacts to the chassis cannot be avoided, then the RSO must ensure that the ricochet hazard caused by the chassis is mitigated. The minimum engagement distances will be no closer than 150m for 7.62mm, 69m for 5.56mm with penetrators, 23m for soft core 5.56mm, and 7m with pistol ammunition.

(5) Anyone seeing an unsafe condition shall call cease fire to correct the issue. Once the unsafe condition issue is corrected, the RSO will authorize training to continue.

4. Safety: In addition to general Range Safety Procedures, the following requirements are specific for activities aboard Range 11 Grenade:

a. The entire range is within the 150 meter SDZ. All personnel will wear helmets, flak jackets, hearing protection, and eye protection when the range is in a "Hot" status.

b. A Corpsman and safety vehicle are needed. Corpsman and a safety vehicle will be physically present in the training area at all times.

c. Dud sweeps on this range will only be conducted by qualified EOD personnel.

d. HE grenades shall be thrown one at a time and only into the designated impact area. All personnel shall be aware of the impact area boundaries and will make every effort to throw grenade within the bermed area.

e. In the event of a dud, training shall cease. Notify Range Control for EOD support. Training shall not resume until authorized by Range Control.

f. Range 11 Grenade training may continue until the mandatory cease fire time of 2300. However, in the event of a dud hand grenade, EOD will not clear it until the next day. The training unit shall provide a guard force until the grenade can be cleared.

g. All personnel not inside the throwing bays shall be located no closer than the waiting area. This is a bench in a defilade position behind the Range 11 Grenade firing line.

h. All grenades impacting outside of the designated impact area shall be reported to Range Control.

i. A Range Guard shall be posted at the bottom of the stairway leading to the Range 11 Grenade waiting area with two-way communication to the RSO. No traffic or personnel shall enter the range without the RSO's permission.

j. Practice grenades shall be thrown in the practice bay behind Range 1 only. The training unit shall police all residue from these grenades.

k. Misfires and Duds will be handled IAW current TM's, current publications, and references.

l. The flagpole is located on the right hand side of the Range 11 firing line near the bunker. Range Control will issue the flag when checking out the range.

m. Safety clips on fragmentation and practice grenades will not be removed until immediately before the safety pin is removed. Once the safety pin has been pulled the grenade will be thrown. No attempt will be made to reinsert the safety pin or to tape the safety lever (spoon). The safety level will not be released for any reason until the grenade exits the throwing hand at the command of the ARSO.

n. All personnel must be proficient in the safety precautions for handling and throwing grenades before live grenade training begins. Successful completion of practice grenade training is mandatory prior to live grenade training.

o. Rehearsals shall be demonstrated and conducted by the training unit for dropped grenade procedures. These will include, but are not limited to the following: grenade dropped in the bay, grenade dropped behind the bay, grenade dropped to either side of the bay, and short grenade throw.

5. Planning Requirements

a. Range 11 Grenade is scheduled through RFMSS and approved by MCBH, S-3.

b. Units unfamiliar with the range are encouraged to conduct a thorough range reconnaissance five days prior to training.

6. Access Control. All units must check in with the Range Control (Building 1584) prior to occupying the range.

7. Facilities

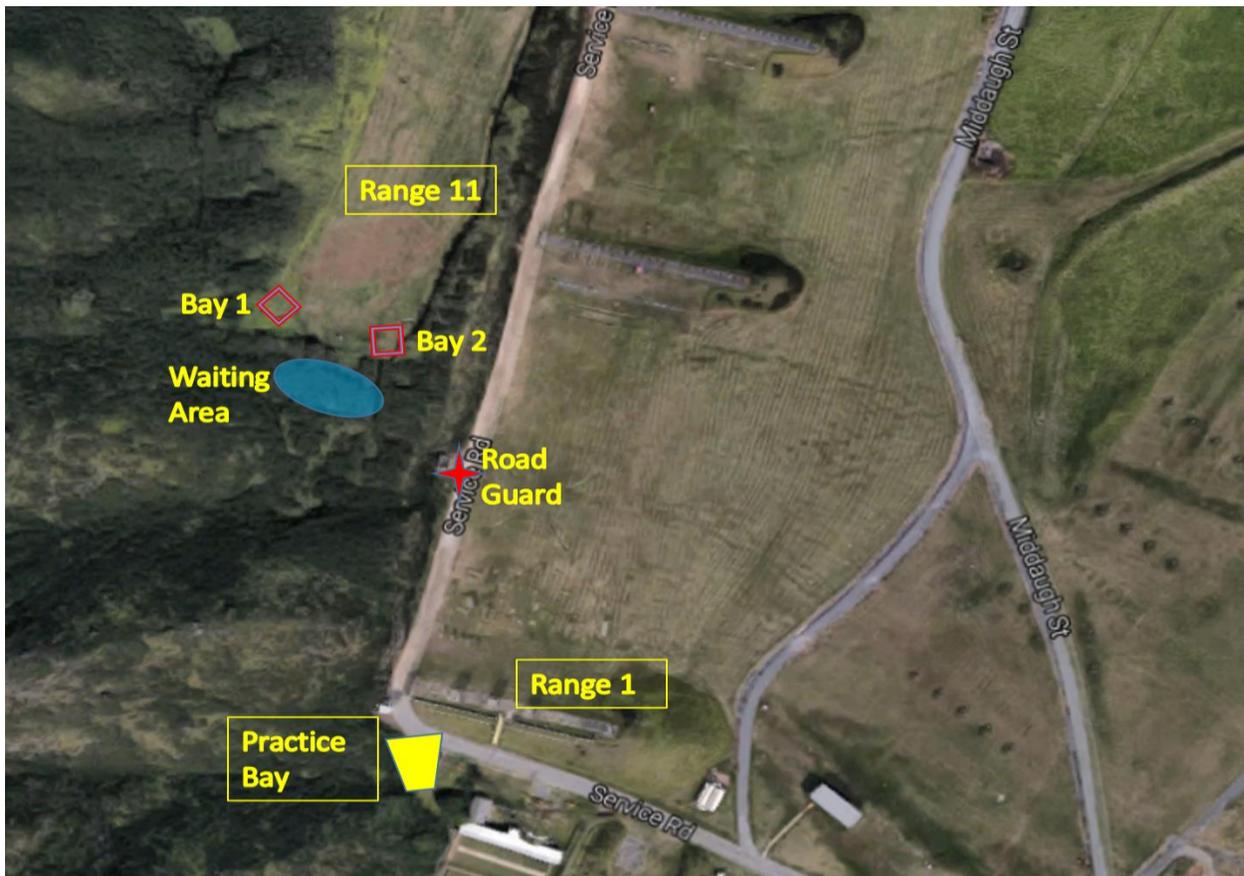
a. Water Spigots. There are water spigots for general use at the following locations:

(1) Behind the 500 yard line on the left hand side of the Range 1.

(2) At the base of the "Head" facility behind the 500 yard line on Range 1.

b. Heads. The heads associated with Range 11 must be kept clean and properly stocked. RSOs will ensure all heads are policed before range is turned back over to Range Control. Separate male and female heads at the base of the range tower, behind the 500 yard line of Range 1.

c. Buildings/Access. If use of any building is required, prior coordination with Range Control is necessary for access and instructions.



Obstacle Course	
Type	Non-Live Fire
Location	LZ Boondocker
Target Distances	N/A
Authorized Weapons	N/A
Authorized Munitions	N/A
Firing Lines	N/A
Target Points	N/A
BOUNDARY LIMITATIONS	
Firing Line	N/A
Close-Out List	N/A
Boundary Grids	N/A

1. Special Instructions:

a. A standard Marine Corps Obstacle Course occupies the south side of the LZ Boondocker.

b. Course will be inspected for possible dangers or damage each day before training.

c. Medical support personnel and safety vehicle must be physically present at this site IOT utilize this TA. They must have, at a minimum, a medical kit bag, splints, and back board with a "C" collar. If medical support is not present or leaves during the evolution, all training must cease.

d. A safety vehicle, which is described as a government vehicle suitable to transport an injured person to the nearest medical facility or ambulance exchange point. POVs are not authorized to be used as safety vehicles.

e. A demonstration with explanation of each obstacle will be conducted prior to utilization of the course.

f. Obstacles must be free of standing water on or around them for utilization.

g. Unit commanders are responsible for conducting and maintaining their own RM.

h. OIC E-5 or above will check out/in the area from Range Control. Units are encouraged to utilize safety personnel knowledgeable about that obstacle for each obstacle.

Leadership Reaction Course	
Type	Non-Live Fire
Location	LZ Boondocker
Target Distances	N/A
Authorized Weapons	N/A
Authorized Munitions	N/A
Firing Lines	N/A
Target Points	N/A
BOUNDARY LIMITATIONS	
Training Lanes	17
Close-Out List	N/A
Boundary Grids	N/A

1. Special Instructions:

a. A standard Marine Corps Leadership Reaction Course occupies the west side of LZ Boondocker.

b. Course will be inspected for possible dangers or damage each day before training.

c. Unit commanders are responsible for determining the level of medical support required. If medical support is not utilized, risks should be mitigated in the RM.

d. A safety vehicle is described as a government vehicle suitable to transport an injured person to the nearest medical facility or ambulance exchange point. POVs are not authorized to be used as safety vehicles.

e. Equipment is kept in the storage locker by the gas chamber classroom.

f. Scenario cards are kept at Range Control and will be signed out with the key.

g. Unit commanders are responsible for conducting and maintaining their own RM.

h. OIC E-5 or above will check out/in the area from Range Control. Units are encouraged to utilize safety personnel knowledgeable about that obstacle for each obstacle.

Gas Chamber	
Type	Non-Live Fire
Location	LZ Boondocker
Target Distances	N/A
Authorized Weapons	N/A
Authorized Munitions	N/A
Firing Lines	N/A
Target Points	N/A
BOUNDARY LIMITATIONS	
Training Lanes	Single Room
Close-Out List	N/A
Boundary Grids	N/A

1. Special Instructions:

a. A single room Gas Chamber that can accommodate up to 20 personnel is located at LZ Boondocker.

b. RSO and OIC are properly certified IAW MCO P3570.1_ and meet the RSO/OIC appointment requirements found in Appendix B. A Chemical, Biological, Radiological, Nuclear, and high yield Explosives (CBRNE) Officer or CBRNE NCO (school trained and qualified) will be on site in order to conduct training.

c. Medical support personnel and safety vehicle must be physically present at this site IOT utilize this TA. They must have, at a minimum, a medical kit bag, splints, and back board with a "C" collar. If medical support is not present or leaves during the evolution, all training must cease.

d. A safety vehicle is described as a government vehicle suitable to transport an injured person to the nearest medical facility or ambulance exchange point. POVs are not authorized to be used as safety vehicles.

e. Training unit will supply the following equipment:

(1) A burner to heat CS capsules

(2) CS pellets; CS grenades are not authorized.

(3) Mission-Oriented Protective Posture gear and associated equipment.

f. Unit commanders are responsible for conducting and maintaining their own RM.

g. RSO and OIC will check out/in the area from Range Control.

Engineer Training Area 1 (ETA-1)		
Type	Non-Live Fire	
Location	Boondocker Training Area	
Target Distances	N/A	
Authorized Weapons	N/A	
Authorized Munitions	N/A	
Firing Lines	N/A	
Target Points	N/A	
BOUNDARY LIMITATIONS		
Firing Line	N/A	
Close-Out List	N/A	
Boundary Grids	04QFJ3028370850	04QFJ3026870794
	04QFJ3033570837	04QFJ3030270770

1. Special Instructions:

a. ETA-1 is approved for heavy equipment operations but can also be utilized for other training. Commanders are encourage to discuss other possible uses for the area with the MCBH RCO to determine if the area is suitable for unit specific training requirements.

b. All disturbed ground must be returned to its original state before the unit can depart the area. Excavation depth allowed is 10 feet.

c. If HAZMAT is detected at any time during training, the unit must stop training and initiate clean up procedures. Range Control must be contacted anytime HAZMAT has been detected.

d. Unit commanders are responsible for conducting and maintaining their own RM.

e. OIC E-5 or above will check out/in the area from Range Control. Units are encouraged to utilize safety personnel knowledgeable about the equipment being utilized for training.

f. Unit commanders are responsible for determining the level of medical support required. If medical support is not utilized, risks should be mitigated in the RM.

Engineer Training Area 2 (ETA-2)		
Type	Non-Live Fire	
Location	MCTAB TA 3, West of MOUT 3	
Target Distances	N/A	
Authorized Weapons	All infantry battalion organic weapon systems	
Authorized Munitions	N/A	
Firing Lines	N/A	
Target Points	N/A	
BOUNDARY LIMITATIONS		
Firing Line	N/A	
Close-Out List	N/A	
Boundary Grids	04QFJ3201562939	04QFJ3206762986
	04QFJ3214162802	04QFJ3220262850

1. Special Instructions:

a. ETA-2 is approved for heavy equipment operations but can also be utilized for other training. Commanders are encourage to discuss other possible uses for the area with the MCBH RCO to determine if the area is suitable for unit specific training requirements.

b. All disturbed ground must be returned to its original state before the unit can depart the area. Excavation depth to 10 feet permitted.

c. If HAZMAT is detected at any time during training, the unit must stop training and initiate clean up procedures. Range Control must be contacted anytime HAZMAT has been detected.

e. Unit commanders are responsible for conducting and maintaining their own RM.

f. Unit commanders are responsible for determining the level of medical support required. If medical support is not utilized, risks should be mitigated in the RM.

Engineer Pit # 3 (BOTA)		
Type	Non-Live Fire	
Location	MCTAB TA 2, Southwest of the FOB	
Target Distances	N/A	
Authorized Weapons	All infantry battalion organic weapon systems	
Authorized Munitions	N/A	
Firing Lines	N/A	
Target Points	N/A	
BOUNDARY LIMITATIONS		
Firing Line	N/A	
Close-Out List	N/A	
Boundary Grids	04QFJ3310351826	04QFJ3311562032
	04QFJ3315361826	04QFJ3322561398

1. Special Instructions:

a. The Engineer Pit 3 was approved for heavy equipment operations but can also be utilized for other training. Commanders are encourage to discuss other possible uses for the area with the MCBH RCO to determine if the area is suitable for unit specific training requirements.

b. Digging or other ground disturbance is limited to four meters in depth. All disturbed ground must be returned to its original state before the unit can depart the area.

c. If HAZMAT is detected at any time during training, the unit must stop training and initiate clean up procedures. Range Control must be contacted anytime HAZMAT has been detected.

d. Unit commanders are responsible for conducting and maintaining their own RM.

e. Unit commanders are responsible for determining the level of medical support required. If medical support is not utilized, risks should be mitigated in the RM.

Combat Vehicle Operator Course (CVOC)		
Type	Non-Live Fire	
Location	MCTAB TA 2	
Target Distances	N/A	
Authorized Weapons	All infantry battalion organic weapon systems	
Authorized Munitions	N/A	
Firing Lines	N/A	
Target Points	N/A	
BOUNDARY LIMITATIONS		
Firing Line	N/A	
Close-Out List	N/A	

1. Special Instructions:

a. MCBH has established a permanent area consisting of obstacles and challenges in order for units to train their drivers. Commanders are

encourage to discuss other possible uses for the area with the MCBH RCO to determine if the area is suitable for unit specific training requirements.

b. The SOM and RM worksheet will be approved at the appropriate unit level per unit SOP for driver training. The OIC/RSO must have on-hand the approved SOM and RM worksheet.

c. The OIC/RSO must ensure that all personnel participating in the training are briefed on the content of this SOP. The brief will cover all off limits areas or activities, obstacle specific information such as entrance and exit characteristics, the SOM/RM, and speed limits at a minimum.

d. No aggressor force is allowed. The obstacles are off limits to dismounted activity not associated with safety.

e. No blanks, SESAMS, smoke or CS grenades, or flash bang devices will be allowed.

f. The authorized unit must stay within the boundaries of the approved training course.

g. If any damage occurs to personnel or property, notify Range Control. All training must cease until the situation is resolved.

h. All unit members and/or vehicles must not interfere with other units' training.

i. Night training is allowed per an approved SOM and RM.

j. If any petroleum, oil, or lubricant spills or leaks, the OIC/RSO must ensure that all proper clean up procedures are used to return the area to a HAZMAT free area. OIC/RSO must notify Range Control immediately.

k. Upon conclusion of training, a police call and visual sweep of all areas that were used for training to ensure that no damage was done to the obstacles must be conducted. All trash and debris must be removed by the training unit and any damage that is discovered must be reported to Range Control.

l. A Range Control inspector will inspect the area with the OIC/RSO prior to securing from the TA.

APPENDIX S

LASER RANGE SAFETY REPORT FOR MCBH



UNITED STATES MARINE CORPS
TRAINING AND EDUCATION COMMAND
1019 ELLIOT ROAD
QUANTICO, VIRGINIA 22134

IN REPLY REFER TO
3550
C 465

JUL 26 2017

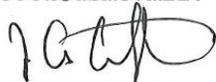
From: Commanding General, Training and Education Command
To: Commanding Officer, Marine Corps Base, Hawaii (O&T, RTAM,
Dan Geltmacher), Box 63002, Kaneohe, HI 96863-3002
Via: (1) Commanding General, Marine Corps Installations
Command (Suite 2E204), 3000 Marine Corps Pentagon,
Washington DC 20350-3000
(2) Commanding General, Marine Corps Installations West-
Marine Corps Base, Box 555010, Camp Pendleton, CA
92055-5010
Subj: TECHNICAL REPORT FOR LASER TRAINING ON MARINE CORPS BASE,
HAWAII, OPERATIONAL TRAINING RANGES
Ref: (a) MCO 3550.9
(b) MCO 3570.1C
Encl: (1) Technical Report Summary
(2) Technical Report LSDZs

1. Per the references, the Technical Report for Laser Training on Marine Corps Base, Hawaii, Operational Training Ranges is enclosed. The report summary is contained in enclosure (1), and the laser surface danger zones for the ground-to-ground and air-to-ground ranges are contained in enclosure (2). Those ranges are certified for laser training.

2. The data contained in this report is valid for three years; changes to range configuration will require a revision, per the references. Approval for class 3B and 4 laser training is authorized only for the ranges identified in enclosure (2).

3. Include the technical information contained within this report in the installation range certification program and standard operating procedures as outlined in reference (a).

4. Point of contact is Mr. Carlos Hathcock at (703) 784-2841 (DSN 278-2841) or carlos.n.hathcock@usmc.mil.


J. A. CRAFT
Chief of Staff

TECHNICAL REPORT SUMMARY

1. INTRODUCTION

- 1.1 The on-site laser survey was conducted at Marine Corps Base (MCB), Hawaii during the period 6-8 February 2017. The analysis provided laser surface danger zones (LSDZs) for base ranges authorized for laser training.
- 1.2 MCB Hawaii has a Laser Range Safety Program that is in compliance with the references. The laser training analysis was accomplished from specified points and areas defined in the MCB Hawaii Range and Training Area Standard Operating Procedures (SOPs).

2. SAFETY AND STANDARDS

- 2.1 During the analysis, the LSDZs in enclosure (2) were integrated with range activities involving weapon systems/ordnance authorized in installation SOPs. In addition, the Nominal Ocular Hazard Distance (NOHD) on the LSDZs in Enclosure (2) was assumed to be unaided (no magnification applied).
- 2.2 For Marine Corps training, this report addresses only those laser systems approved for training by the Navy/Marine Corps Laser Safety Review Board (LSRB). Appropriately procured United States Army (USA)/United States Air Force (USAF)/North Atlantic Treaty Organization (NATO) laser systems with a hazard evaluation LSRB-type letter can also be used on these ranges under the constraints of this report.
- 2.3 A declination of 9.5 East from True North to Magnetic North was used for this report.

3. SOURCE DOCUMENTS/REFERENCES

- 3.1 The Military Grid Reference System, Universal Transverse Mercator, and Geodetic (latitude/longitude) grid coordinates were used to describe the various ranges, target areas, and firing locations, and were taken from the following sources:
 - 3.1.1 Guidance provided by Mr. Dan Geltmacher, MCB Hawaii Range and Training Area Manager.

- 3.1.2 Geographic Information System (GIS) data obtained from MCB Hawaii Range Control personnel. Data for this report was sourced from geographic datum's and the World Geodetic System of 1984 (WGS84). All coordinates shown in this report are in WGS84.
- 3.1.3 MCB Hawaii Ranges technical report data is located on the Marine Corps Range and Training Area Management System website at <https://rtam.tecom.usmc.mil>.

4. DESCRIPTION. All LSDZ layouts are created using the Laser Range Management Tool, version 10.4.1.0.2, a GIS-based software system; the LSDZs are described by installation and range name.

5. SURVEY. Training and Education Command's Range and Training Area Management Branch and MCB Hawaii Range Control personnel conducted the survey of laser training. All members present during the survey took an active role and assisted with precise distance measurements, data collection, identification of hazards, and range use in accordance with the installation SOPs.

6. RESULTS

- 6.1 Ground-Ground Lasing. The ground LSDZs in enclosure (2) are compatible with ground systems using 5, 10, and 15 mill radian buffer angles for safe lasing. All ground-ground LSDZs will be mitigated by terrain or NOHD if the laser energy cannot be contained within the installation boundary. If a SDZ of a specific weapon/munition combination is greater than the LSDZ of the associated ground laser, such as the PEQ-15/16, then an LSDZ is not required. However, the range being used must be assessed for specular reflectors. Any lasers associated with a specific weapon system will not be used independently.
- 6.2 Air-Ground Lasing. There is a unique LSDZ for each air-ground scenario. The Minimum Safe Lasing Altitude (MSLA) LSDZ provide a safe lasing altitude for a specific location in the Laser Training Area (LTA) in feet, above ground level, and is well-suited for LSDZ analysis of rotary-wing aircraft and unmanned aircraft systems (UASs). The Flight Profile LSDZ uses the most conservative safe lasing altitudes

for a specific distance to the target in units of feet, mean sea level, and is well-suited for LSDZ analysis of fixed-wing aircraft and UASs. Both the MSLA and Flight Profile come from the same data which ensures both are from the same analysis source.

- 6.3 If standing water, glass, or any other reflective material becomes present within or near any of the established LTAs, the laser range safety officer (LRSO) will either suspend the laser use or ensure the removal of the reflective material(s).
- 6.4 For ground analysis, unless otherwise indicated, the offset (height above ground) of the targets is 3 meters; the offset for the firing point used for lasing is 2 meters.
- 6.5 The digital elevation model used for ground-to-ground analysis has a cell size representing 10 meters. For air-to-ground analysis the elevation model has a cell size representing 30 meters.

7. LASER TRAINING POLICY

- 7.1 All laser operators will meet the following minimum requirements:
 - 7.1.1 Have received the appropriate laser range briefing from the range safety officer/LRSO before use of any laser.
 - 7.1.2 Be knowledgeable with MCB Hawaii Laser Range Safety Program and adhere to the SOPs.
 - 7.1.3 Fire lasers only after positive identification of the approved target(s). "Approved targets" imply that adequate backstops exist to contain the laser energy or that the NOHD will be contained within the controlled area of the range.
- 7.2 LRSOs will ensure that all non-participating personnel remain outside the LSDZs during laser operations.
- 7.3 LRSOs will be knowledgeable of the systems for which they are responsible and with all aspects of laser operations and associated hazards for laser use.

TECHNICAL REPORT LSDZs

1. SUMMARY

1.1 There were three ground-to-ground ranges and two air-to-ground ranges that were surveyed during the recertification period.

1.2 The following MCB Hawaii ranges (ground-to-ground) were certified for laser training:

1.2.1 Range 5

1.2.2 Controlled Fire Area (CFA) Range 5 (for use when CFA is active)

1.2.3 Observation Post 10 (and associated range)

1.4 The following MCB Hawaii range (air-to-ground) was certified for laser training using MSLA:

1.4.1 R-3102 Special Use Airspace (SUA) MSLA (For Helicopter/UAS lasing operations)

1.5 The following MCB Hawaii range (air-to-ground) was certified for laser training using Flight Profile:

1.5.1 R-3102 SUA Flight Profile (For Helicopter/UAS lasing operations)

2. The LSDZs for these certified ranges are included herein.

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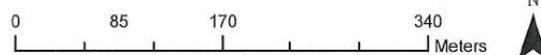
RMTK Build: 10.4.1.0.2.b6064
RMTK Build Date: 05/15/2017

MCB Hawaii Range 5

32



Legend:
 Laser SDZ



LSDZ Creator: JJ MacMillan		Date: 7/5/2017	Unit: Marine Corps Ranges	Email: jeffrey.j.macmillan@usmc.mil			
Approving Authority: Carlos Hathcock		Date: 7/5/2017	Unit: Marine Corps Ranges	Email: carlos.n.hathcock@usmc.mil			
Analysis Properties		Name	Type	Offset (m)	Azimuths	MGRS	Elevation (m)
Scenario Name: Range 5		Firing Point	Firing	2	N/A	04QFJ3174272755	48.29
Buffer Angle: 15 milliradians		Firing Point_1	Firing	2	N/A	04QFJ3178572709	43.29
NOHD: Terrain Mitigated		Left Target Point	Target	3	38 ° Grid	04QFJ3219873342	50.41
Elevation Data: oahu_10m_utm4n		Right Target Point	Target	3	46 ° Grid	04QFJ3229073201	43.55
Laser: LSRB Approved							

Map Scale: 1:5,000
Layout Date: 07/05/2017

RMTK Build: 10.4.1.0.2.b6064
RMTK Build Date: 05/15/2017

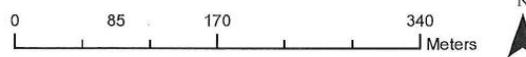
MCB Hawaii CFA Range 5

32



Legend:

Laser SDZ



LSDZ Creator: JJ MacMillan		Date: 7/5/2017	Unit: Marine Corps Ranges	Email: jeffrey.j.macmillan@usmc.mil		
Approving Authority: Carlos Hathcock		Date: 7/5/2017	Unit: Marine Corps Ranges	Email: carlos.n.hathcock@usmc.mil		
Analysis Properties		Name	Type	Offset (m)	Azimuths	MGRS
Scenario Name: CFA Range 5		Firing Point	Firing	2	N/A	04QFJ3174272757
Buffer Angle: 15 milliradians		Firing Point_1	Firing	2	N/A	04QFJ3184472665
NOHD: Terrain Mitigated		Left Target Point	Target	3	38 ° Grid	04QFJ3219873342
Elevation Data: oahu_10m_utm4n		Right Target Point	Target	3	39 ° Grid	04QFJ3228573219
Laser: LSRB Approved						
						Elevation (m)
						48.31
						36.36
						50.41
						43.36

LSDZ when Controlled Firing Area is Active

Enclosure 2

Map Scale: 1:5,000
Layout Date: 07/05/2017

RMTK Build: 10.4.1.0.2.b6064
RMTK Build Date: 05/15/2017

MCB Hawaii OP 10

32



Legend:
 Laser SDZ

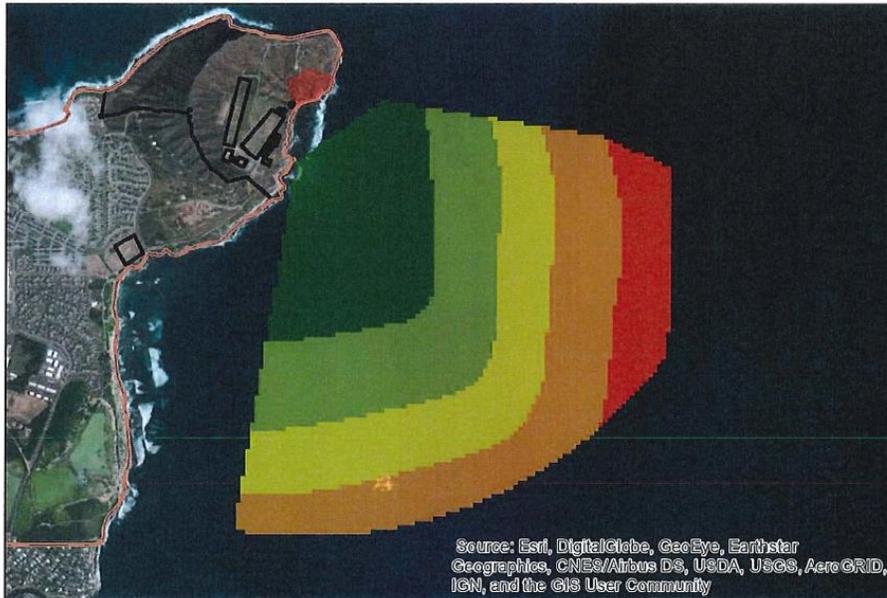


LSDZ Creator: JJ MacMillan		Date: 7/5/2017		Unit: Marine Corps Ranges		Email: jeffrey.j.macmillan@usmc.mil			
Approving Authority: Carlos Hathcock		Date: 7/5/2017		Unit: Marine Corps Ranges		Email: carlos.n.hathcock@usmc.mil			
Analysis Properties				Name	Type	Offset (m)	Azimuths	MGRS	Elevation (m)
Scenario Name: OP_10				Firing Point	Firing	2	N/A	04QFJ3141073016	198.5
Buffer Angle: 15 milliradians				Left Target Point	Target	3	67 ° Grid	04QFJ3218473338	50.6
NOHD: Terrain Mitigated				Right Target Point	Target	3	81 ° Grid	04QFJ3220773138	27.17
Elevation Data: oahu_10m_utm4n									
Laser: LSRB Approved									

Layout Date: 07/05/2017

MCB Hawaii R3102 SUA MSLA

RMTK Build: 10.4.1.0.2.b6064
RMTK Build Date: 05/15/2017



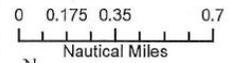
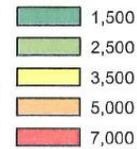
MSLA Area

Scale 1:40,000

Legend

Stay above in feet AGL

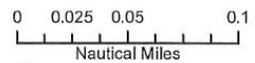
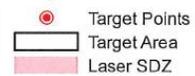
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LSDZ Area

Scale 1:5,000

Legend



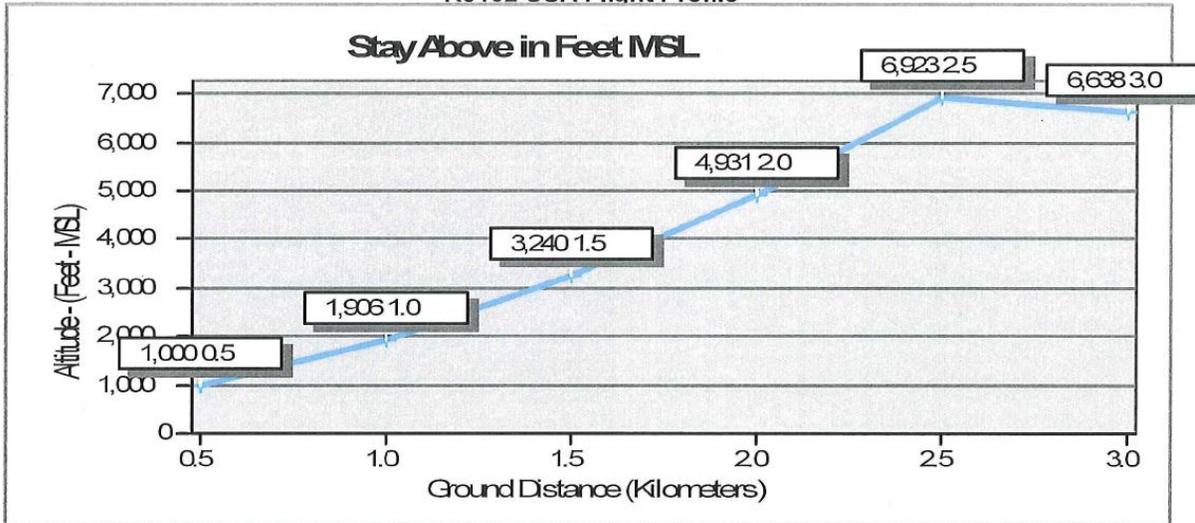
LSDZ Creator: JJ MacMillan	Date: 7/5/2017	Unit: Marine Corps Ranges	Email: jeffrey.j.macmillan@usmc.mil
Approving Authority: Carlos Hathcock	Date: 7/5/2017	Unit: Marine Corps Ranges	Email: carlos.n.hathcock@usmc.mil
Analysis Properties Range Properties			
Scenario Name: R3102_SUA_Gunnery	Airspace Limit (Ft MSL): 7,000	Laser Bearing (Degrees)	Altitude Distance Parameters
Buffer Angle: 5 milliradians	Target Name: Impact_Area	Start: 270	Max Ceiling (Ft): 7,000
Perimeter Shots: 25	Target Type: Area	End: 360	Min Floor (Ft): 0
Elevation Layer: oahu_ocean30m	Target Center: 04QFJ3219673143	Bearings: 31	Adjustment (Ft): 1
Laser: LSRB Approved		Mag. Declination: 9.5 East	Ground Dist Max (NM): 1.62
			Ground Dist Min (NM): 0.27
			Dist Adjustment (NM): 0.27

Lasing Operations into Impact Area

Map Scale: 1:5,000
Layout Date: 06/29/2017

RMTK Build: 10.4.1.0.2.b6064
RMTK Build Date: 05/15/2017

MCB Hawaii
R3102 SUA Flight Profile



LSDZ Extent



Legend

■ Laser SDZ

0 0.025 0.05 0.1
Nautical Miles



LSDZ Creator: JJ MacMillan	Date: 6/29/2017	Unit: Marine Corps Ranges	Email: jeffrey.j.macmillan@usmc.mil
Approving Authority: Carlos Hathcock	Date: 6/29/2017	Unit: Marine Corps Ranges	Email: carlos.n.hathcock@usmc.mil
Analysis Properties Range Properties		Laser Bearing (Degrees)	Altitude Distance Parameters
Scenario Name: R3102_SUA_Gunnery	Airspace Limit (Ft MSL): 7,000	Start: 270	Max Ceiling (Ft): 7,000
Buffer Angle: 5 milliradians	Target Name: Impact_Area	End: 360	Min Floor (Ft): 0
Perimeter Shots: 25	Target Type: Area	Bearings: 31	Adjustment (Ft): 1
Elevation Layer: oahu_ocean30m	Target Center: 04QFJ3219673143	Mag. Declination: 9.5 East	Ground Dist Max (NM): 1.62
Laser: LSRB Approved			Ground Dist Min (NM): 0.27
			Dist Adjustment (NM): 0.27

APPENDIX T

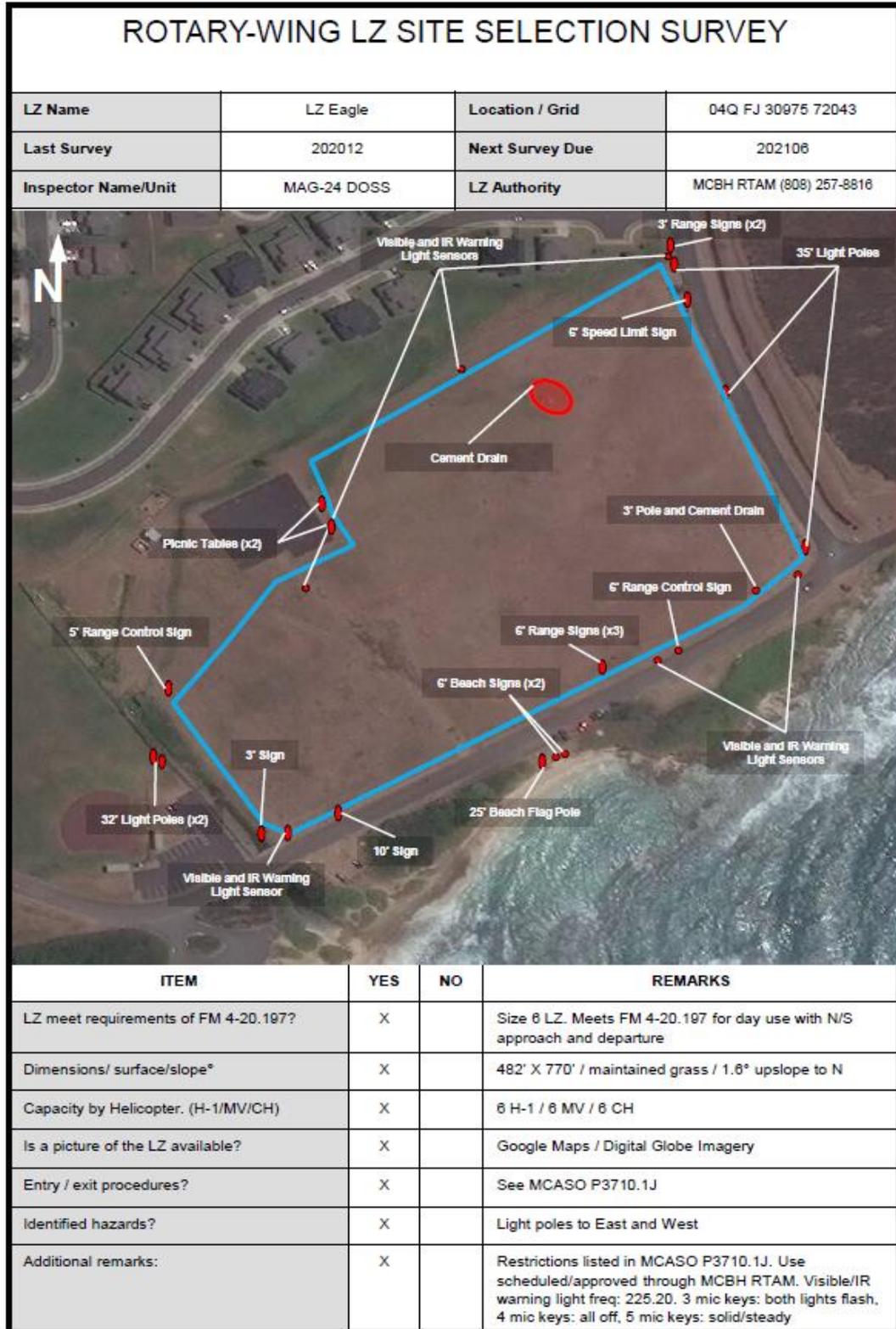
MCBH Rotary LZ Site Survey

ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ 216	Location / Grid	04Q FJ 28438 71760
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816
ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 6 LZ. Meets FM 4-20.197 for day use with N/S approach and departure.
Dimensions/ surface/slope°	X		341' x 355.5' / Trimmed Grass / 0°
Capacity by Helicopter. (H-1//MV/CH)	X		4 H-1 / 4 MV / 4 CH
Is a picture of the LZ available?	X		Google Maps / Digital Globe Imagery
Entry / exit direction?	X		See MCASO P3710.1J
Identified hazards?	X		25-35' Trees in North, light and flag poles
Additional remarks:	X		Restricted to day VFR use only. Unless otherwise approved, normal operations will be one aircraft into and out of LZ 216. Use is scheduled and approved through MCBH Range and Training Area Management.

ROTARY-WING LZ SITE SELECTION SURVEY

LZ Name	LZ Boondocker	Location / Grid	04Q FJ 30305 71003
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8818

ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 6 LZ. Meets FM 4-20.197 for day use with E/W approach and departure
Dimensions/ surface/slope ^a	X		524.9' x 540' / Hard packed dirt, level rock / grass / 0°
Capacity by Helicopter. (H-1/MV/CH)	X		Formation flights into and out of LZ Boondocker are permitted for sections only. A maximum of six aircraft may be in LZ Boondocker at any one time.
Is a picture of the LZ available?	X		Google Earth / Digital Globe Imagery
Entry / exit direction?	X		See MCASO P3710.1J
Identified hazards?	X		Low brownout, 61' trees in NW corner
Additional remarks:	X		Restricted to day VFR use only. The Control Tower will provide approach and departure approval. Use is scheduled and approved through MCBH Range and Training Area Management.



ROTARY-WING LZ SITE SELECTION SURVEY

LZ Name	LZ Country	Location / Grid	04 FJ 31391 72999
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816



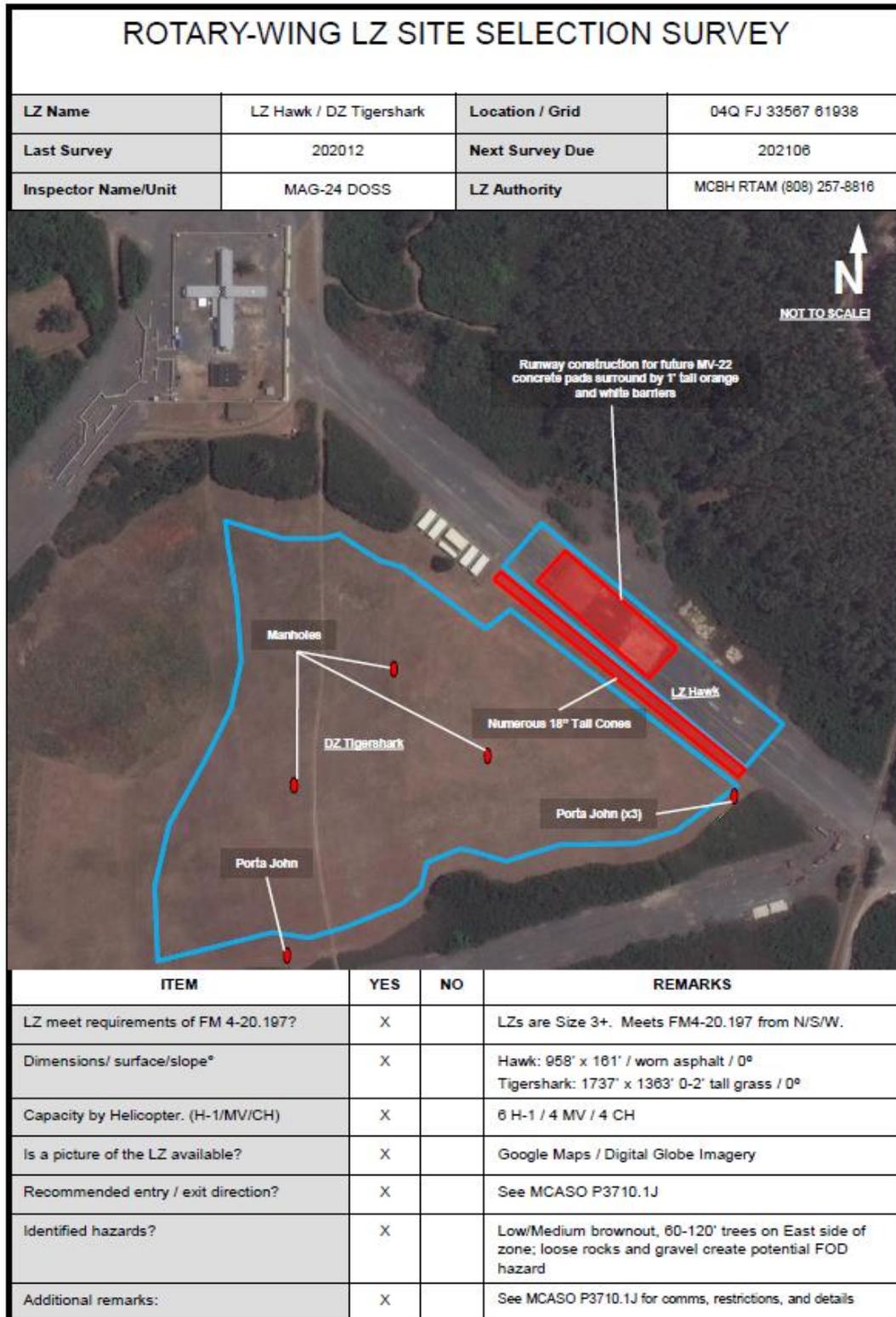
ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?		X	Pad will accommodate Size 2 aircraft, entire LZ is closer to Size 1 parameters. Deliberate ORM required. Trees, brush, and saplings shall be cleared before use.
Dimensions/ surface/slope°	X		50' diameter concrete pad (164' x 59' zone surrounding pad) / concrete pad with 2-8' tall grass and saplings surrounding it / 0°. Zone is largely overgrown.
Capacity by Helicopter: (H-1/MV/CH)	X		1 UH
Is a picture of the LZ available?	X		Google Maps
Recommended entry / exit direction?	X		Based off predominant winds
Identified hazards?	X		9.5-10.5' Shrubs bound LZ to N and S. 11' pole must be removed by ground personnel prior to A/C arrival.
Additional remarks:	X		Pinnacle landing; nearly vertical cliffs E/W sides of LZ. Use is scheduled and approved through MCBH Range and Training Area Management.

ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ Romeo 9	Location / Grid	04Q FJ 31962 72769
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816
ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 2 LZ, will accommodate Size 3 A/C. Meets FM 4-20.197 for day use with N/E/S approach and departure
Dimensions/ surface/slope°	X		508' x 105' / grass 0-2' tall / 2.0° upslope E to W
Capacity by Helicopter. (H-1/MV/CH)	X		1 UH
Is a picture of the LZ available?	X		Google Maps / Digital Globe Imagery
Recommended entry / exit direction?	X		Keep all entry/exits to E and S
Identified hazards?	X		Bleachers in Southern portion of LZ can be removed by range control. Sharply rising terrain within 350m of LZ.
Additional remarks:	X		56' telephone poles and wires SW of LZ near range control building. Use is scheduled and approved through MCBH Range and Training Area Management.

ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ Chickadee	Location / Grid	4Q FJ 33301 61625
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816

ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		LZ Size 3. Meets FM4-20.197 from NE/SW.
Dimensions/ surface/slope°	X		1987' L x 161' W (133' width at East end) / worn asphalt/ 0°
Capacity by Helicopter. (H-1/MV/CH)	X		6 H-1 / 4 MV / 4 CH
Is a picture of the LZ available?	X		Google Maps Imagery
Recommended entry / exit direction?	X		See MCASO P3710.1J
Identified hazards?	X		Low/Medium brownout, 54' trees on South and North sides of zone; loose rocks and gravel create potential FOD hazard. Some trees protrude into the zone.
Additional remarks:	X		See MCASO P3710.1 for comms, restrictions, and details

ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ Gull	Location / Grid	04Q FJ 33201 63587
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816
<p><u>NOT TO SCALE</u></p>			
ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 2 LZ, can accommodate Size 6 A/C. Meets FM 4-20.197 for use with NE/SW approach and departure
Dimensions/ surface/slope°	X		788' x 127', narrows to 73' at southwestern end worn asphalt and 0-2' tall grass / 0°
Capacity by Helicopter. (H-1/MV/CH)	X		6 H-1 / 4 MV / 4 CH
Is a picture of the LZ available?	X		Google Maps / Digital Globe Imagery
Recommended entry / exit direction?	X		See MCASO P3710.7J
Identified hazards?	X		High brownout, Loose rocks and gravel create FOD hazard. Overgrown scrub encroaching on N and S sides of runway severely limiting width of zone. 42' trees on N side and 60' trees on south side. Fence line to east.
Additional remarks:	X		See MCASO P3710.1J for comms, restrictions, and details



ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ Noni	Location / Grid	4Q FJ 32928 61929
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8816

NOT TO SCALE

ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		LZ Size 3. Meets FM4-20.197 from NE/SW.
Dimensions/ surface/slope*	X		183' x 491' / 14' tall shrub patches and worn asphalt/ 0°
Capacity by Helicopter. (H-1/MV/CH)	X		6 H-1 / 4 MV / 4 CH
Is a picture of the LZ available?	X		Google Maps Imagery
Recommended entry / exit direction?	X		See MCASO P3710.1J
Identified hazards?	X		Low/Medium brownout, 43' trees on East side and 39' trees on west side of zone; loose rocks and gravel create potential FOD hazard
Additional remarks:	X		See MCASO P3710.1J for comms, restrictions, and details

ROTARY-WING LZ SITE SELECTION SURVEY			
LZ Name	LZ Owl	Location / Grid	04Q-FJ 33495 62592
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	MCBH RTAM (808) 257-8818

NOT TO SCALE

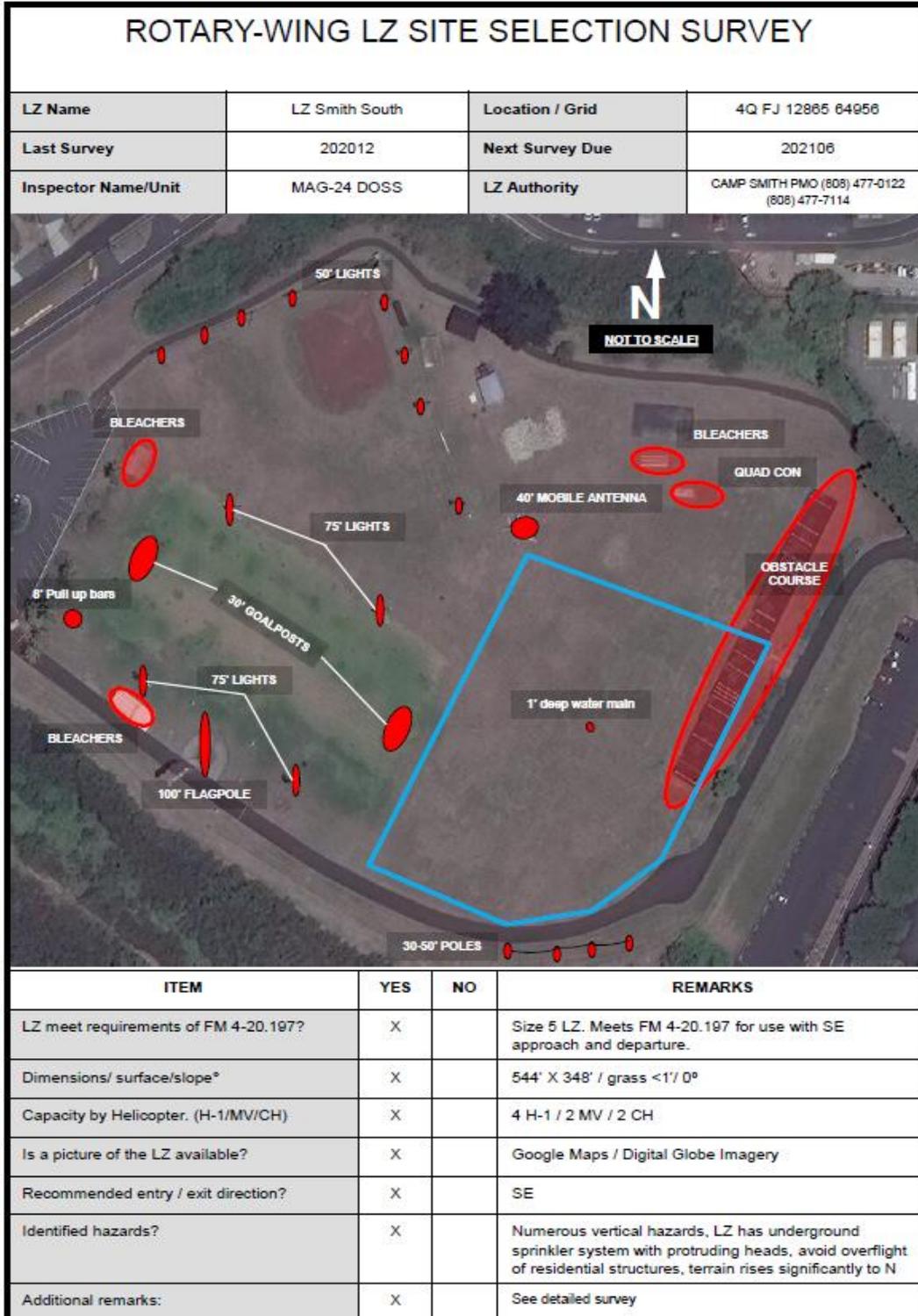
ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 4 LZ. Meets FM 4-20.197 for use with NE/SW approach and departure.
Dimensions/ surface/slope°	X		1584' X 248' / worn asphalt / 0°
Capacity by Helicopter. (H-1/MV/CH)	X		6 H-1 / 4 MV / 4 CH
Is a picture of the LZ available?	X		Google Maps Imagery
Recommended entry / exit direction?	X		See MCASO P3710.7J
Identified hazards?	X		Low to moderate brownout, buildings to SW, 50-75' trees surround zone, parking lot beyond fence line
Additional remarks:	X		See MCASO P3710.1J for comms, restrictions, and details

ROTARY-WING LZ SITE SELECTION SURVEY

LZ Name	LZ Smith	Location / Grid	D4Q FJ 13993 65567
Last Survey	202012	Next Survey Due	202106
Inspector Name/Unit	MAG-24 DOSS	LZ Authority	CAMP SMITH PMO (808) 477-0122 (808) 477-7114



ITEM	YES	NO	REMARKS
LZ meet requirements of FM 4-20.197?	X		Size 5 LZ. Meets FM 4-20.197 for use with SE approach and departure.
Dimensions/ surface/slope ^a	X		367' X 452' / grass <1' / 0°, pad is 100' x 100' concrete
Capacity by Helicopter. (H-1/MV/CH)	X		2 H-1 / 1 MV / 1 CH on pad
Is a picture of the LZ available?	X		Google Maps / Digital Globe Imagery
Recommended entry / exit direction?	X		SE
Identified hazards?	X		20' trees to S, 75' trees to W, N, E. 25', windsock to S. Small boulder and LZ sign 100' NE of pad. Possible FOD with cut grass and deteriorating pad. Area of high GA traffic, residential neighborhood. 9' pole to S.
Additional remarks:	X		See detailed survey



RANGE CONTROL USE ONLY
UNIT

K-Bay Range Training Facility

RANGE CONTROL USE ONLY
TRAINING AREA

Range Facility Assignment Form

1. The following information is to be filled out by the OIC or RSO of the assigned range.

- a. Unit _____
- b. OIC (Print) _____ Cell# _____
Rank Last Name First Name
- c. RSO (Print) _____ Cell# _____
Rank Last Name First Name
- d. Safety Corpsman (Print) _____
- e. Type of Training _____
- f. Range Facility _____ Start Date _____ End Date _____
 Range Facility _____ Start Date _____ End Date _____
 Range Facility _____ Start Date _____ End Date _____
 Range Facility _____ Start Date _____ End Date _____
 Range Facility _____ Start Date _____ End Date _____
- g. Weapons to be used _____
- h. Caliber / Type / DODIC _____
(IE: 5.56 BALL A059, 40mm HE B546)

2. The following items have been issued by Range Control: **RSO or OIC initial for items being issued.**

- _____ Range Regulations _____ Range Flags
- _____ Utilization Report _____ Inspection Form
- _____ Radio # _____ Key(s) # _____
- _____ Other Items issued if applicable _____
(IE: target controls, etc.)

-----RANGE CONTROL USE ONLY-----

CHECK-IN TIME: _____ OCC TIME: min _____

TRAINING TIME: _____ HOT TIME: min _____

COLD TIME: _____

RANGE BRIEF GIVEN BY RANGE CONTROL

AMMO/DOC'S INSPECTED BY RC

PRE-FIRE INSPECTION BY RANGE CONTROL

COPY OF 1348 / AMMO DOCs FOR RECORD

RCO VERIFIED SCHEME OF MANUEVER AND ORM

POST FIRE INSPECTION BY RC INSPECTOR

OIC/RSOCHECKLIST

RANGE OFFICER-IN-CHARGE (OIC), AND
RANGE SAFETY OFFICER (RSO) CHECKLIST

- Ensure either the OIC or RSO is in possession of the current range SOP and Operational Risk Management Worksheet for the range scheduled.
- Ensure the RSO is familiar with the surface Danger zone, left and right lateral limits and troop penetration limits for the particular range scheduled.
- Ensure two-way communication is established with Range control prior to going "HOT", both for the handheld radio issued and tactical radios being used on the range. Hourly radio checks to Range control are required. If communication is lost the range will go into a "CHECK-FIRE" status until communication is reestablished.
- Request to go into a "HOT" status from Range Control prior to the conduct of training.
- Ensure the required road/beach guards are posted according to the current range order for the range scheduled, and conduct radio checks every hour to the RSO, OIC, or Range control. If communication is lost the range will go into a "CHECK-FIRE" status until communication is reestablished.
- Ensure required medical support, to include non-training corpsman, safety vehicle, backboard/stretchers with "C" collar, and unit five medical bag are physically present on the Range/Training Area prior to requesting a "HOT" status from Range Control.
- Ensure the RSO is completely familiar with emergency Medical/Casualty Evacuation Procedures.
- Ensure all ammunition malfunctions and accidents are reported to Range control.
- Ensure RSO is familiar with weapon systems being used on the range.
- Verify all weapons are cleared and on safe prior to removal from range.

- Ensure a shakedown of all personnel and equipment is conducted at the conclusion of firing.
- Ensure a proper police call is conducted on the range prior to the post raining inspection. The unit will not depart the area until cleared by the Range Inspector.
- Ensure the four, weapon safety rules are understood and not violated.
- Ensure the four weapon conditions are covered for the weapon systems, as applicable.
- Request to go into a "COLD" status from Range control at the conclusion of training.
- As the RSO and ore for this range, it will be our only duty and we must be physically present during all periods of training.
- I understand the left, right, and stay below limits within the range training area. Water cannons and booby birds that are impacted by intentional or negligent actions will result in cancelled training and RSO/OIC revocation.
- I have read and understand the MCB Hawaii Standing Operating Procedures for the Range/Training Area being utilized and will follow all special instructions verbal or written.

RSO _____
(Print Name and Rank)

OIC _____
(Print Name and Rank)

(Signature of RSO)

(Signature of OIC)

Notes/Comments:

USMC KANEOHE HAWAII, K-BAY RANGE CONTROL (808-257-3180)
UTILIZATION REPORT
THIS FORM IS TO BE FILLED OUT BY THE OIC & RSO UPON COMPLETION OF TRAINING

DATE: _____ RANGE: _____ USING UNIT: _____

Number of Personnel Trained on Range: _____

Hot Time: _____ Cold Time: _____

WEAPON/DODIC USAGE

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

Weapon Nomen: _____	DODIC: _____	QTY: _____
DUDS/MISFIRE RECORDED: _____ Estimated location/Grid: _____		

EQUIPMENT/VEHCILE SUPPORT

Nomenclature: _____	Model: _____	QTY: _____
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Nomenclature: _____	Model: _____	QTY: _____
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Nomenclature: _____	Model: _____	QTY: _____
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Nomenclature: _____	Model: _____	QTY: _____
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Nomenclature: _____	Model: _____	QTY: _____
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OIC SIGNATURE

RSO SIGNATURE

K-Bay Range Training Facility
Pool Assignment Form

1. The following information is to be filled out by the OIC and RSO utilizing the base pool.

Date _____ Time (Start) _____ Time (End) _____

Unit _____ Total Personnel Count _____

OIC (Print) _____ Cell# _____
(Must have water in Certification remarks, E-6 or above)

RSO (Print) _____ Cell# _____
(Must have water in certification remarks, E-5 or above)

The following are present and on site. OIC or RSO initial.

_____ Certified safety swimmer. (Certified by a recognized authority. May not be the OIC or the RSO. Examples: MCIWS, lifeguard, rescue swimmer.)

_____ Dedicated safety vehicle with a non-training Corpsman or equivalent, stretcher and aid bag. Present at all times.

_____ Range binder and radio # _____

RANGE BRIEF

OIC: I, (Sign) _____ have been briefed and understand the duties and responsibilities as the Officer In Charge. I understand that I am responsible for the overall safety and conduct of training aboard the above-mentioned training area. I understand all requirements of RTF and MCBH.

RSO: I, (Sign) _____ have been briefed and understand the duties and responsibilities as the Range Safety Officer. I understand that I am responsible for the safe supervision of operations aboard the above-mentioned training area. I understand all requirements of RTF and MCBH.

RANGE BRIEF AND PRE INSPECTION BY RANGE CONTROL

POST INSPECTION BY RANGE CONTROL

Unit: _____		Training Area: _____	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
Date: _____	OIC: _____ / _____	Phone: _____	
Print Name and Rank		Sign	
RSO: _____	_____ / _____	Phone: _____	
Print Name and Rank		Sign	
<p>By signing, OIC acknowledges that they have been briefed and understand the duties and responsibilities as the Officer in Charge, OIC is responsible for the overall safety and conduct of training aboard the above mentioned ranges and/or training areas. OIC has reviewed all regulations and statements of understanding.</p>			
<p>By signing, RSO acknowledges that they have been briefed and understand the duties and responsibilities of the Range Safety Officer. RSO is responsible for the safe supervision of operations aboard the above mentioned ranges and training areas. RSO has reviewed all regulations and statements of understanding.</p>			

Classroom Sign-Out

1. The following information is to be filled by the requesting personnel.

- a. Date: _____
- b. REQUESTER (Print/Rank): _____
- c. Cell: _____
- d. Unit: _____
- e. CLASSROOM(s): _____
- f. Purpose of Training: _____
- g. Number personnel training: _____

2. The following items have been issued by Range Control.

Keys: #: _____, #: _____, #: _____, #: _____

-----CLASS ROOM BRIEF-----

REQUESTER: I (Signature) _____ have been briefed and understand the duties and responsibilities as the requester. I understand that I am responsible for the overall safety and conduct of training, condition of the classroom upon completion.

-----RANGE CONTROL-----

SIGNED OUT TIME: _____
TRAINING END TIME: _____
TURNED IN TIME: _____

CLASSROOM BRIEF GIVEN BY RANGE
CONTROL

POST USE INSPECTION BY RC
INSPECTOR

INDEMNITY AND HOLD HARMLESS AGREEMENT

In consideration of my being able to participate in Training being conducted on Marine Corps Base Hawaii, Kaneohe Bay, Hawaii, on (Date) _____, the undersigned agrees to the following:

- 1. That I acknowledge and fully understand that I will be engaging in Training on the (Training Area) _____. These activities are known to be inherently dangerous and involve substantial risk of serious injury, including permanent disability, death, and while particular protective equipment and personal discipline will minimize this risk, the risk of serious injury does exist. I also understand that such injury may result from not only my action or inaction but also the actions or inactions of

others, or the conditions of the training facilities. I knowingly and freely assume all such risks, both known and unknown, even if arising from the negligence of those persons released from liability below, and assume full responsibility for my participation. Prior to participating in any Training on the (Training Area) _____. If I believe that anything is unsafe, I will advise range officials, in particular the Range Safety Officer, of such conditions and refuse to participate. I fully and voluntarily accept all risks associated, so that I may engage in this training activity. I understand that by accepting such opportunity, I incur no obligation towards the United States Government except as imposed by this

release. I understand that the United States Government is not acting as a training facilitator for hire and does not bear the liabilities attaching to that status.

(Int.) _____
Releaser's Initials or Parent/Legal Guardian

2. I hereby release and hold harmless, waive, discharge, and covenant not to sue, the United States Government, including all of its subdivisions, officers, military personnel, employees and agents (hereinafter called the releaser) with respect to any and all injury, disability, death, or loss or damage to person or property, whether caused by the negligence of the releases or otherwise, except that which is the result of gross negligence and/or wanton misconduct. I hereby release the United States Government from all liability for any injury including death or permanent disability, to me, caused or alleged to have been caused, in whole or in part by the negligence of the RELEASER or otherwise caused, or resulting from, or in connection with Training on (Training Area) _____. I have had a full and fair opportunity to consult an attorney about this agreement, and understand that such consultation is prudent and make this agreement voluntarily.

(Int.) _____
Releaser's Initials or Parent/Legal Guardian

3. I agree that this release not only binds myself, but also my family, heirs, assigns, administrators, and executors. Accordingly, I indemnify and hold harmless the release from all liability and responsibility of any sort for all damage, injury, death, and loss to all persons incident to my injuries sustained during this Training on the

(Training Area) _____

(Int.) _____
Releaser's Initials or Parent/Legal Guardian

4. Should I sustain any injury while participating in or observing this Training on the (Training Area) _____, I hereby authorize any emergency first aid, medication, medical treatment or surgery deemed necessary by licensed medical personnel.

(Int.) _____
Releaser's Initials or Parent/Legal Guardian

5. I have considered purchasing insurance for this activity. I understand and agree that neither the United States, the U.S. Marine Corps, nor any of their partners, agents, employees, or agencies will insure me.

(Int.) _____
Releaser's Initials or Parent/Legal Guardian

(Sign) _____
Parent/Legal Guardian Signature Print Date

Range Control Officer Signature Print Date

Unit Letterhead

3570
OIC
Date

From: Officer In Charge, Unit
To: Installation Range Control Officer, S-3, Marine Corps Base Hawaii
Subj: REQUEST FOR DIGGING FIGHTING POSITIONS IN FIGHTING POSITION AREA
REQUESTED DIG AREA
Ref: (a) MCBHO 1500.9C
(b) MCTAB Fighting Position Signed Categorical Exclusion

1. Unit is scheduled to conduct type of training, date, at training area, reserved under RFMSS RCNI number. A total of number personnel will be trained by number instructors and will be accompanied by number Medics/Corpsman/EMTs and number support personnel.
2. Areas to be dug will be in accordance with the references and located:

APPROX # OF POSITIONS	LEFT GRID	RIGHT GRID

3. Per reference (b), all fighting positions dug must be wholly contained in one of the five approved dig sites. Holes will measure approximately 36"x20"x5' deep. No more than 70 holes will be dug in any one dig site at a time.
4. All fighting positions must be dug using only hand tools (E-tools, shovels, pickaxes).
5. Upon completions of training all holes must be filled in with only the earth excavated from the hole it came from.
6. Upon uncovering any trash, liquids, odors, human remains or archeological items, OIC will immediately cease training in the area and contact Range Control.
7. Precautions will be taken to avoid excessive erosion to include preventing soil from entering waterways. Training will be rotated amongst the various dig sites to prevent erosion.
8. CONOPS/SOM submitted to range control operations officer NLT five days prior to training.
9. The POC for this request is the Rank First Name MI. Last Name, at Phone Number or e-mail at e-mail.

FI. MI. LNAME

Unit Letterhead

3570
OIC
Date

From: Officer In Charge, Unit
To: Installation Range Control Officer, S-3, Marine Corps Base Hawaii
Subj: REQUEST FOR UTILIZATION OF MILITARY GRADE PYROTECHNICS IN THE
REQUESTED TRAINING AREA
Ref: (a) MCBHO 1500.9C

1. Unit is scheduled to conduct type of training, date, at training area, reserved under RFMSS RCNI number. A total of number personnel will be trained by number instructors and will be accompanied by number Medics/Corpsman/EMTs and number support personnel.

2. Simulated attacks by the opposing forces, will be managed by the instructors and carried out by the opposing forces. Blank ammunition for individual weapons, smoke, practice grenades and artillery simulators, along with simulated flash-less IED devices are requested to be utilized as listed under the following table:

DODIC	DESCRIPTION	COUNT	LOCATION by GRID

3. IAW reference (a), all smoke will be expended in steel buckets placed on open ground and surfaces free of brush or grass.

4. All simulator type pyrotechnics, capable of producing noise, explosion, flash and heat, will be utilized on open ground surfaces off of roadways and upon the former runway and upon or very near to roadways, on open surfaces free of brush or grass, to simulate IED explosions, booby traps and hand grenades in close-in dismounted fighting scenarios between the training personnel and designated opposing force personnel.

5. Flash less IED simulator devices, commercially procured and produced, producing a loud explosive sound and expending baby powder only, will be used upon or near roadways to simulate command detonated IEDs upon contact with training personnel.

6. All devices, regardless of DODIC, description and purpose(s), will be expended by the course instructors only, wearing and utilizing safety equipment, utilizing steel buckets for smoke and open ground for simulators, with fire-fighting equipment readily available (fire extinguishers, five gallon cans of water, shovels, picks and heavy camouflage net bags for smothering). A minimum of two (2) instructors will be on hand to manage the

training scenarios with one instructor prepared to mitigate any possible fire-starting situations. All residue will be recovered.

7. All devices will be expended during daylight hours, on weekdays only.

8. The point of contact for this request memorandum is the Rank First Name (FI) Middle Initial (MI) Last Name (LNAME), at Phone Number or e-mail at e-mail.

FI. MI. LNAME

Complete and Give to Fire Desk	DOWNRANGE/RECON FORM												DOWN RANGE START TIME: _____	DOWN RANGE RETURN TIME: _____
	DATE (s):				Start Time:				End Time:					
	UNIT:				POC:				CELL:					
	VEHICLE MAKE/MODEL:								COLOR:					
	DOWNRANGE LOCATION/FACILITIES:													
	PURPOSE OF DOWNRANGE:								NUMBER IN PARTY:					
	ISSUED BY RANGE CONTROL													
	KEY (S) NUMBER					RADIO(S) #				BINDER #				
	ISSUED TO: (Signature) X													
	BRIEFED BY:													
Complete and Give to Fire Desk	DOWNRANGE/RECON FORM												DOWN RANGE START TIME: _____	DOWN RANGE RETURN TIME: _____
	DATE (s):				Start Time:				End Time:					
	UNIT:				POC:				CELL:					
	VEHICLE MAKE/MODEL:								COLOR:					
	DOWNRANGE LOCATION/FACILITIES:													
	PURPOSE OF DOWNRANGE:								NUMBER IN PARTY:					
	ISSUED BY RANGE CONTROL													
	KEY (S) NUMBER					RADIO(S) #				BINDER #				
	ISSUED TO: (Signature) X													
	BRIEFED BY:													
Complete and Give to Fire Desk	DOWNRANGE/RECON FORM												DOWN RANGE START TIME: _____	DOWN RANGE RETURN TIME: _____
	DATE (s):				Start Time:				End Time:					
	UNIT:				POC:				CELL:					
	VEHICLE MAKE/MODEL:								COLOR:					
	DOWNRANGE LOCATION/FACILITIES:													
	PURPOSE OF DOWNRANGE:								NUMBER IN PARTY:					
	ISSUED BY RANGE CONTROL													
	KEY (S) NUMBER					RADIO(S) #				BINDER #				
	ISSUED TO: (Signature) X													
	BRIEFED BY:													

Expiration Date:

License Plate:

Unit:

Vehicle Owner:

Issue Date:

Vehicle Pass for Marine Corps Base Hawaii

TA BELLOWS

This certifies that the bearer of this pass can enter MCBH TA Bellows. This pass is to remain in the front windshield of the vehicle assigned at all times. If there are any questions, comments, or concerns please call (808)257-3180 or (808)257-3600.

Range Control OIC / or Chief

Pass #

This pass is non-transferable

Expiration Date:

License Plate:

Unit:

Vehicle Owner:

Issue Date:

Vehicle Pass for Marine Corps Base Hawaii

TA BELLOWS

This certifies that the bearer of this pass can enter MCBH TA Bellows. This pass is to remain in the front windshield of the vehicle assigned at all times. If there are any questions, comments, or concerns please call (808)257-3180 or (808)257-3600.

Range Control OIC / or Chief

Pass #

This pass is non-transferable

Expiration Date:

License Plate:

Unit:

Vehicle Owner:

Issue Date:

Vehicle Pass for Marine Corps Base Hawaii

TA BOONDOCKERS

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Range Control OIC / or Chief

Pass #

This pass is non-transferable

Expiration Date:

License Plate:

Unit:

Vehicle Owner:

Issue Date:

Vehicle Pass for Marine Corps Base Hawaii

TA BOONDOCKERS

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Range Control OIC / or Chief

Pass #

This pass is non-transferable

KANEOHE BAY RTF: BEACH GUARD BRIEF

Unit: _____ Range: _____ Date: _____

Name: _____
Rank Last, Name First Name MI Cell Phone Number

Name: _____
Rank Last Name First Name MI Cell Phone Number

DUTIES & RESPONSIBILITIES FOR K-BAY RTF BEACH GUARDS

1. Communication will be maintained with Range Control at all times.
2. Your call sign is "BEACH GUARD" and Range Control will be "RANGE CONTROL".
3. You will conduct a radio check every 30 minutes. You will communicate directly with Range Control and not with unit personnel aboard the RTF. Should the radio fail to transmit, remain in the beach guard bunker. Do not attempt to walk down to Range Control. If you miss your 30 minute radio check, Range Control will attempt to contact you. If Range Control fails communication with Beach Guard One, Range Control will place all units in Check-Fire and physically come to the beach guard bunker for evaluation.
4. You are to be especially watchful for vessels and aircraft that approach the danger zone and shall notify Range Control immediately whenever a vessel or aircraft is sighted. Report the location, using the grid method, type and direction of movement.
5. Ensure that once you have been posted for duty as the beach guard. Stay inside the beach guard bunker, behind the red line at all times.
6. Prior to being relieved, a police call of the beach guard bunker is to be conducted.
7. The following items have been issued by Range Control:
_____ Map _____ Radio # _____
8. By signing below, I certify that I have been briefed and understand all duties and responsibilities.

Beach Guard Signature

Beach Guard Signature Range Control Staff

VEHICLE PRE-INSPECTION CHECKLIST			2015 GREY/CHEVY/1866P	
OPERATOR AND INSPECTOR		LOCATION		SIGN AND DATE
TIME & MILEAGE OUT		TIME & MILEAGE IN		
INSPECTION LIST	SAT	UNSAT	REMARKS	
FUEL				
TIRE				
SPARE TIRE & JACK				
INTERIOR				
EXTERIOR				
ALL LIGHTS				
TRASH				
REMARKS				
Driver side interior door lock switch broken. Driver side seat ripped. Center console top broken. Front license plate missing.				

