

**UNITED STATES MARINE CORPS**

**Marine Corps Installations West-Marine Corps Base, Camp Pendleton**



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**RANGE AND TRAINING AREA**  
**STANDING OPERATING PROCEDURES**  
**(MCIWEST-MCB CAMPENO 3500.1A)**



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Range Operations Division  
Assistant Chief of Staff, G-3/5  
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MCIWEST-MCB  
CAMPENO 3500.1A  
G-3/5 ROD  
18 OCT 2018

MCIWEST-MCB CAMPEN ORDER 3500.1A

From: Commanding General  
To: Distribution List

Subj: MARINE CORPS INSTALLATIONS WEST-MARINE CORPS BASE, CAMP PENDLETON  
RANGE AND TRAINING AREA STANDING OPERATING PROCEDURES

- Ref:
- (a) MCO 3570.1, Range Safety
  - (b) MCO 8020.10, Marine Corps Explosives Safety Management Program
  - (c) MCO 5530.14, Marine Corps Physical Security Program Manual
  - (d) MCO 8025.1, Class V(W) Malfunction and Defect Reporting
  - (e) MCO 5104.1, Navy Laser Hazards Control Program
  - (f) MCO 1500.52, Marine Corps Water Survival Training Program (MCWSTP)
  - (g) MCO 8010.13, Class V(W) Administrative and Management Program
  - (h) MCO 3400.3, Chemical, Biological, Radiological and Nuclear Defense Training Requirements
  - (i) MCO 3500.27, Risk Management
  - (j) MCIWEST-MCB CAMPENO 5090.2, National Environmental Policy Act (NEPA) Procedures for Marine Corps Base, Camp Pendleton (MCB CamPen)
  - (k) MCIWEST-MCB CAMPENO 5000.2, Base Regulations
  - (l) MCIWEST-MCB CAMPENO 1700.4, Waiver of the Minimum Drinking Age for Alcohol Consumption
  - (m) MCIWEST-MCB CAMPENO 8000.1, Ammunition and Explosive Safety
  - (n) Camp Pendleton Military Installation Map, V795S, Edition 4-NGA
  - (o) MCB CamPen Aviation Training Facilities Inventory of 24 Feb 05
  - (p) FM 3-23.30, Grenades and Pyrotechnic Signals
  - (q) StaO 3710.1, Airfield Operations Manual, Marine Corps Air Station Camp Pendleton
  - (r) United States Coast Pilot 7 (Pacific Coast: California, Oregon, Washington, Hawaii and Pacific Coast)
  - (s) Laser Range Safety Certification Report for Marine Corps Base, Camp Pendleton, San Diego, CA of Jun 2012
  - (t) NAVMED P-5010-4, Manual of Naval Preventive Medicine

Reports Required:

- I. Mishap Reports under WESS (Report Control Symbol MC-5102-08) chap. 1, par. 1015
- II. Class V(W) Ammunition Malfunction Report (Report Control Symbol DD-8025-01) chap. 7, 7003

1. Situation. The Commanding General (CG) is republishing information, instructions, and procedures governing the use of ranges, training areas, airspace and sea space operated and controlled by Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN), per references (a) through (t).

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.



2. Cancellation. MCIWEST-MCB CAMPENO 3500.1.

3. Mission. To ensure all agencies and units operating within Marine Corps Base, Camp Pendleton (MCB CamPen) training space designated as ranges, aviation and ground training areas, delegated special use airspace, and sea space under the control of the CG MCIWEST-MCB CAMPEN adhere to these regulations.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Final result desired is safe operations along MCB CamPen ranges, aviation and ground training areas, delegated special use airspace, and sea space - preserving life, equipment, and natural resources.

(2) Concept of Operations. This Order will be distributed as directed and all agencies shall review and incorporate procedures from this most current version.

b. Coordinating Instructions

(1) This Order contains substantial revision and should be completely reviewed.

(2) In the event these instructions conflict with those issued by higher authority, orders of higher authority shall take precedence. Notify the CG (Attn: Assistant Chief of Staff (AC/S), G-3/5) of any conflict or question of interpretation.

(3) Review of the laser special instructions, aviation special instructions, range special instructions and the aviation facilities study should be accomplished by commanders and all personnel in a supervisory role prior to conducting any training aboard MCIWEST-MCB CAMPEN.

(4) Commanders of organizations utilizing the ranges aboard MCB CamPen are encouraged to submit recommendations concerning improvements or changes to the CG (Attn: AC/S G-3/5).

5. Administration and Logistics. Directives issued by this Headquarters are published and distributed electronically. Electronic versions of MCIWEST-MCB CAMPEN directives can be found at:  
[https://eis.usmc.mil/sites/mciw\\_mpwr/MCIWMCBADJ/default.aspx](https://eis.usmc.mil/sites/mciw_mpwr/MCIWMCBADJ/default.aspx).

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6. Command and Signal

a. Command. This Order is applicable to all commands, organizations, units and activities located aboard MCB CamPen.

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

  
J. D. WILLIAMS  
Chief of Staff

DISTRIBUTION: A-4  
B  
C



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# Chapter 1

## General

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## CHAPTER 1

### General

#### 1000. PURPOSE AND SCOPE

1. General. This Order prescribes the regulations and general precautions to be taken while conducting training activities within the Marine Corps Installations West-Marine Corps Base, Camp Pendleton, (MCIWEST-MCB CAMPEN) California, Range Complex. The Range Complex consists of the land space designated as ranges, aviation and ground training areas, delegated special use airspace, and sea space identified for training within this order. Failure to comply with these regulations may result in death or injury to personnel, or damage to equipment. In addition, noncompliance may result in suspension of Installation complex training privileges.

2. Purpose. The primary purpose of this Order is to establish policy which will guide and support training of operational units in those skills required to facilitate the training continuum, and ensure a safe and realistic training environment.

#### 1001. TRAINING SPACE

1. The training space designated as ranges, aviation and ground training areas, delegated special use airspace, and sea space is identified and visually depicted on the Marine Corps Base, Camp Pendleton (MCB CamPen) 1:50,000 Military Installation Map, reference (n).

2. Units or personnel accessing the MCB CamPen Range Complex must maintain a MCB CamPen Military Installation Map and Environmental Operations Map.

3. Unless otherwise described, all grid coordinates used in this Order correspond to the MCB CamPen Military Installation Map. Personnel should use the MCB CamPen Military Installation Map in conjunction with this Order for pre-mission planning to confirm locations of intended operating areas.

4. Unless otherwise stated, all headings/directions used in this Order are magnetic.

1002. MANEUVER CORRIDORS. In accordance with the Marine Air Ground Task Force (MAGTF) Training Program, training of Marine Corps units is executed on a continuum, beginning with training of individual Marines in basic and advanced warfighting skills, continuing through training of small units, and culminating in the MAGTF Large Scale Exercise. Based on the training continuum, proficiency with the variety of military weapons and hardware used by Marines stationed aboard MCB CamPen is crucial to the readiness of the Marine Corps and the military training mission of MCB CamPen. A key to developing weapons proficiency is ready access to the Range and Training Areas (RTA) across MCB CamPen's interior, particularly those firing positions located around the perimeter of the Zulu, Whiskey and Quebec impact areas located generally in the center of MCB CamPen. Additionally, amphibious landing operations, with follow on movement to critical training ranges, are fundamental to the development of core competencies. One of the primary components of accessing interior ranges is the availability of inland transit routes, called maneuver corridors (Diagram 1-1). These maneuver corridors



facilitate movement of military personnel, equipment and vehicles to key locations in order to support the training continuum.

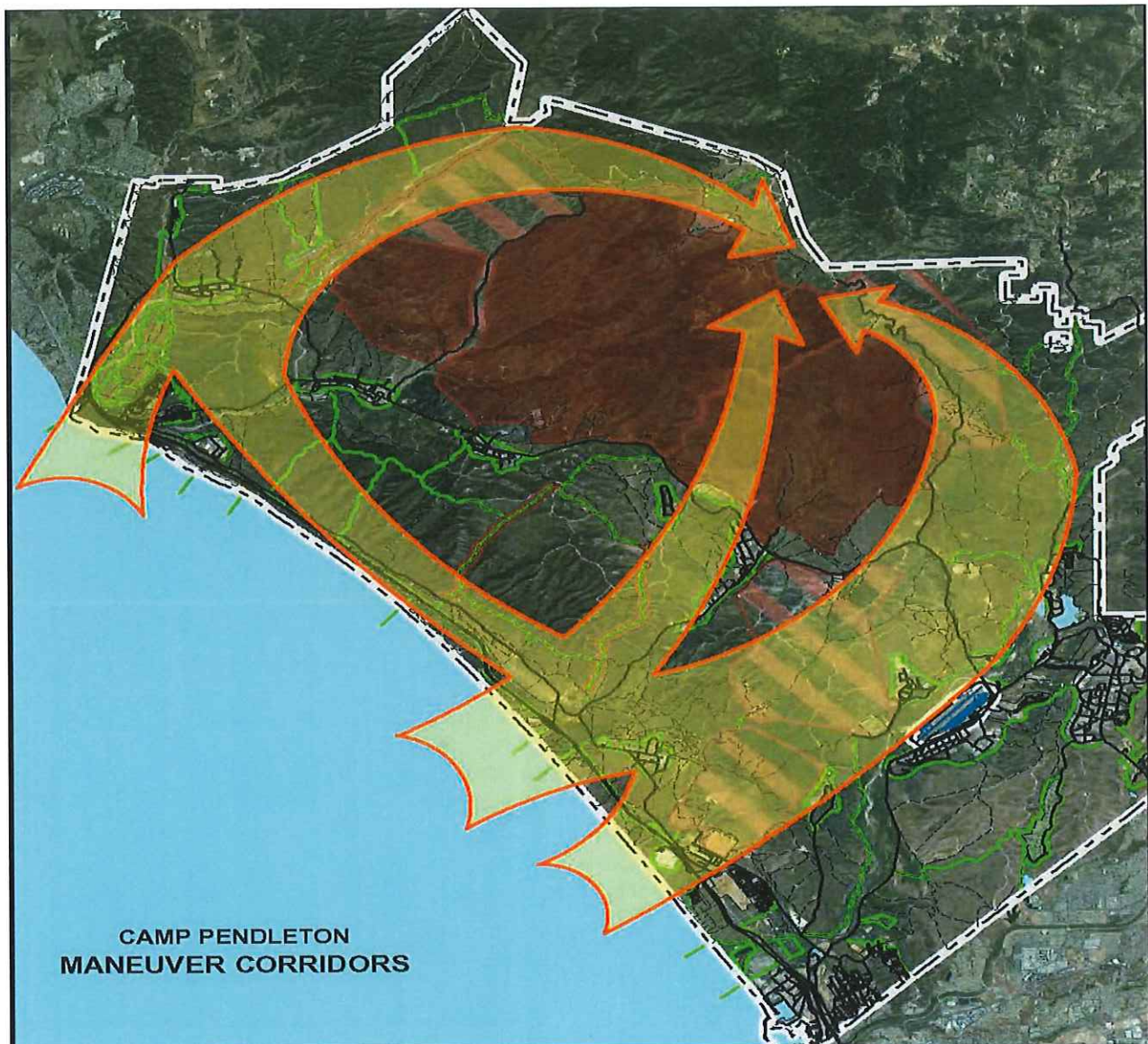


Diagram 1-1

1003. RANGE CONTROL. The Range Operations Division (ROD), AC/S G-3/5, MCIWEST-MCB CAMPEN operates the Range Control Facility for the MCIWEST-MCB CAMPEN Range Complex. ROD provides scheduling, safety, and command and control services in support of unit training within MCB CampPen Range Complex. ROD is located aboard Marine Corps Air Station (MCAS) CampPen in Building 2399. The ROD Scheduling Office schedules all Range Complex activities. The Range Control Officer (RCO) is responsible for implementation of the range and training area safety program. The Range Operations Branch - call sign "LONGRIFLE" - provides command and control for all operations conducted within the MCIWEST-MCB CAMPEN Range Complex. ROD contact information is listed in Figure 1-1.

Range Operations Division Contact Information		
Office	Phone	Email
Range Scheduling	(760) 725-3510/4219/0362	PNDL_OTRANGESCHEDULING@usmc.mil
Range Control Officer	(760) 725-0355	
LONGRIFLE	(760) 725-3974/4604/4277	PNDL_OTLONGRIFLE@usmc.mil
Range Safety Inspectors	(760) 725-4926	PNDL_OTRANGEINSPECTORS@usmc.mil
Administrative Support	(760) 725-0357	
Web Site	<a href="http://www.pendleton.marines.mil/Staff-Agencies/Assistant-Chief-of-Staff-G-3-5/Range-Operations-Division/">http://www.pendleton.marines.mil/Staff-Agencies/Assistant-Chief-of-Staff-G-3-5/Range-Operations-Division/</a>	
SharePoint Site	<a href="https://eis.usmc.mil/sites/mciw_mpwr/MCIWMCBADJ/default.aspx">https://eis.usmc.mil/sites/mciw_mpwr/MCIWMCBADJ/default.aspx</a>	

Figure 1-1

#### 1004. RANGE COMPLEX ACCESS

1. The MCB CamPen Range Complex is available for training operations 24 hours a day, 365 days per year. Access must be scheduled and/or coordinate with ROD.
2. Normal times for live fire ranges are 0600 to 2359 daily.
3. To request extended live fire times, submit a request via Range Facility Management Support System (RFMSS) or e-mail to the Range Scheduling Office at least five working days in advance.

#### 1005. RANGE SUSTAINMENT AND MODERNIZATION

1. Units that identify discrepancies with or damage to range and training areas, or their associated facilities and training systems should contact Range Maintenance at (760) 725-4852 or submit a service request via the Range Management System (RMS) at:  
<https://www.mciwest.usmc.mil/inst/mciwest/RMS/default.aspx>.
2. Units requesting modifications or improvements to range and training areas, or adding new range and training capabilities should contact the Range and Training Area Management Division at (760) 725-4254 or submit a project request via SharePoint at:  
<https://www.mciwest.usmc.mil/inst/mciwest/rpolicy/rRTAM/default.aspx>.

#### 1006. BATTALION/SQUADRON COMMANDER RESPONSIBILITIES

1. General. Ensure compliance with this Order, directives in the Marine Corps Order 3570 series, applicable technical manuals, field manual, and Marine Corps Warfighting Publications, applicable Safety of Use Memorandums, Installation Range Guidance, and applicable standard operating procedures (SOP) for safe training and firing for each weapon system within the command.



a. Designate an Officer in Charge (OIC) and or a Range Safety Officer (RSO) for all training events in accordance with the provisions listed in Figure 1-1, and paragraphs 1002 and 1003 of this Order. At your discretion, RSOs for Nonlive Fire training, other than dive or parachute operations, may be designated by company/battery commanders.

b. Develop Risk Management (RM) procedures for all phases of training activities in accordance with reference (I) or service level equivalent. A type written RM worksheet signed by the battalion/squadron commander, designating the OIC and RSO, must be on hand during all training activities.

2. Briefing. Ensure all personnel within the command are briefed on Installation range procedures and safety requirements including required personal protective equipment.

#### 1007. OIC AND RSO QUALIFICATIONS

1. Unless specifically authorized by the RCO or this Order, all personnel entering ranges and training areas must be supervised by a MCIWEST-MCB CAMPEN locally qualified RSO. As discussed below, a RSO for training safety oversight and a RSO supervising administrative activities have specific RSO training qualification requirements, in accordance with Figure 1-2. Additionally, certain training events require supervision by a MCIWEST-MCB CAMPEN qualified OIC. Foreign or bilateral nation partners serving as OIC or RSO must be proficient in English.

2. Training OICs and/or RSOs are required for all types of training (maritime activity, Para Ops, convoys, Helicopter Rope Suspension Training, gas chambers, hikes, etc.) and live fire with munitions involving projectiles or explosives. Personnel in this category include military personnel, law enforcement officers, civilian contractors providing military training and civilian entities conducting live fire as part of a formal agreement with the installation commander. Qualification requirements for a Training OIC and RSO are listed in paragraphs 1003.2 and 1004.2.

3. An administrative RSO is required for supervision of events or activities not related to training. Personnel in this category include civilians providing range and training area services such as construction projects, environmental survey, or facility maintenance. An administrative RSO only requires MCIWEST-MCB CAMPEN specific training to ensure safe transition and operations in line with their activities.

4. Specific information regarding OIC and RSO training and qualification may be obtained from the ROD SharePoint site.

#### 1008. OIC OF TRAINING

1. General. The OIC shall be of equivalent or senior rank to the RSO. The OIC maintains surveillance of firing and safety within the entire surface and vertical hazard space of the assigned range; he/she shall be physically present at live fire events. The OIC is a supervisory position conducted by a commissioned officer, warrant officer, staff noncommissioned officer, noncommissioned officer or Government Service civilian equivalent. Civilian contractors shall not perform the duties as an OIC. The OIC may personally



participate in training, as long as the OIC can maintain control of the training event.

## 2. Training

a. The OIC must complete the Training and Education Command (TECOM) Distance Learning Range Safety Course (DLRS) and the MCIWEST-MCB CAMPEN Range Safety Certification Course (RSCC).

b. Upon successful completion of the RSCC, Range Operations will enter those names into the RFMSS data base.

c. Both DLRS and local certification are valid for three years. DLRS expiration date and local certification expiration date will coincide with each other. Personnel with DLRS that expire within 90 days or less will not be tested for local range safety certification.

## 3. Responsibilities

a. The OIC shall have a detailed RM worksheet, signed by the unit commander in their possession covering all phases of training. For live fire and maneuver (LFAM) training, an approved concept of operations, scheme of maneuver and RCO Brief Sheet must also be in their possession at all times while training.

b. The OIC shall ensure all personnel wear the appropriate personal protective equipment. Helmets and flak jackets shall be worn for any live fire event involving movement or maneuver, high explosives or grenades, machine gun, or Close Quarters Battle (CQB) in shoot houses. For all other training, either the RM or unit Standing Operating Procedures will determine if helmets and flak jackets will be required.

c. The OIC must be knowledgeable on the weapon(s) or weapons system(s) being used and brief the RSO on the duties to be performed in support of the training event, and clearly establish the requirement for the RSO to brief the OIC on the safety of the facility/unit, and the readiness to commence live-fire operations prior to the start of firing.

d. The OIC is responsible for accountability, handling, turn-in and proper use of ammunition and explosives. OICs will account for all ammunition and explosives on the Navy Marine Corps Form 11381 Expenditure Report.

e. The OIC will verify the RSO is qualified with the weapon(s) or weapons system(s) being used.

f. The OIC will ensure the RSO provides for a dedicated emergency vehicle and medical personnel for all training events as prescribed in Figure 1-2.

g. Coordinate all Medical Evacuation (MEDEVAC) requirements with LONGRIFLE.

1009. RANGE SAFETY OFFICER (RSO) OF TRAINING

1. General. The RSO assists in maintaining surveillance of firing and safety within the entire surface and vertical hazard space of the assigned range; shall be physically present at the training site. The RSO is a supervisory position conducted by a commissioned officer, warrant officer, staff noncommissioned officer, noncommissioned officer, or civilian equivalent. Civilian contractors may act as RSOs when approved by the CG. The RSO shall not participate in training. THE RSO WILL NOT BE ASSIGNED OTHER DUTIES NOR FIRE A WEAPON, and will be the last to leave the range following completion of firing and clean-up, ensuring the range is clear of all personnel and equipment. The RSO will ensure trash and brass are removed from the range after completion of training.

2. Training

- a. The RSO must complete the TECOM DLRS and the MCIWEST-MCB CAMPEN RSCC.
- b. Upon successful completion of the RSCC, ROD will enter those names into the data base.
- c. Both DLRS and local certification are valid for three years. DLRS expiration date and local certification expiration date will coincide with each other. Personnel with DLRS that expire within 90 days or less will not be tested for local range safety certification.

3. Responsibilities

- a. The RSO is responsible for the enforcement of applicable safety regulations contained in this Order, directives in the MCO 3570 series, and other applicable field, technical, and ordnance publications. The RSO shall be qualified on the weapon(s) or weapons system(s) being used.
- b. The RSO must be able to identify the right and left lateral limits for all live fire ranges, and that each firing position observes the proper left and right limits for each firing lane. The RSO will ensure that no cross firing between firing lanes occurs.
- c. The RSO shall maintain communications with LONGRIFLE at all times. When communications are lost, the RSO will cease all training until communications are reestablished.
- d. RSOs shall conduct the check-in/check-out process for all ranges and training areas as outlined in paragraph 6002 of this Order.
- e. The RSO shall ensure all weapons settings (i.e., headspace, timing, Fire Direction Center (FDC), and safety "T") are correct.
- f. The RSO shall provide for a dedicated emergency vehicle and medical personnel for all training events as prescribed in Figure 1-2.
- g. The RSO for parachute and airdrop operations shall be current and qualified Jumpmaster performing as the Drop Zone Safety Officer (DZSO); the RSO/DZSO must be at the DZ during parachute/airdrop operations.



1010. SAFETY

1. Safety is the responsibility of every individual, at all times, and is a key factor in successful training. Concerns for safety, however, should never be limited to the training event itself, but should always include associated activities as well; including any movement to and from training, maintenance activities, bivouac operations, etc.

OIC/ RSO Appointment Requirements						
EVENT	OIC*1/2/5			RSO*2/3/5		
	OFF	WO	NCO	OFF	WO	NCO
HC Smoke/Riot Control Agents *6	X	X	E-6	X	X	E-5
CBRN Confidence Training (Gas Chamber) *4	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 Trainer, Light Armored Vehicle 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, (All 40mm HE); Live Mines, Demolitions; Tank & Fighting Vehicle Cannons; Recoilless Rifles	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 (NO Munitions)	X	X	X	X	X	E-4
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	X	X	E-7	X	X	E-6
Steel Reactive Targets	X	X	E-7	X	X	E-6

- \*1 - The OIC shall be of equivalent or senior rank to the RSO.  
 \*2 - Marine Corps Community Services activities may be conducted without an OIC, corpsman or safety vehicle as long as a qualified MCB CampENO 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.



Figure 1-2

2. Any individual who observes an unsafe condition shall report the location and condition immediately to LONGRIFLE. A training event or any other activity affected by the unsafe condition shall be halted until the unsafe condition has been corrected.

3. All members associated with the training event have the option to call "cease-fire." The greatest danger to life and limb is associated with live-fire; therefore, range restrictions for various weapons/ammunition are listed in the special instructions for each range.

4. Effects of live fire must be contained within designated impact areas and associated surface danger zones (SDZ)/weapon danger zones (WDZ) for ranges. If the effects of live fire are known or suspected to have been fired outside of the SDZ/WDZ for the range, such an event must be reported to LONGRIFLE immediately.

#### 1011. MEDICAL SUPPORT REQUIREMENTS

##### 1. Minimum Requirements

a. The minimum level of medical personnel to support military or federal governmental agency non-live fire training is a Combat Life Saver.

b. The minimum level of medical personnel to support military or federal governmental agency live fire training is a Navy Corpsman, or service level equivalent.

c. The minimum level of medical personnel to support Non-Federal Entity live fire training is an Emergency Medical Technician.

d. Unit commanders shall conduct a risk analysis to determine the requirement for a greater level of medical personnel support.

2. Live Fire Training. When munitions are utilized on ranges or in training areas, the OIC will ensure appropriate medical personnel with first aid equipment and safety vehicle are present, unless specifically excluded in this Order. Medical personnel shall not be assigned additional duties when live fire is in progress.

3. Non-Live Fire Training. During non-live fire training within training areas and beaches, the RSO will ensure appropriate medical personnel and safety vehicle are present.

4. Safety Vehicles. A wheeled vehicle designated as a safety vehicle shall be present for all training activity. Privately Owned Vehicles (POV) shall not be used as safety vehicles. When possible, the vehicle should be an ambulance. At a minimum, the safety vehicle shall be capable of accepting a litter.

5. During Helicopter Support Team or HRST operations, the helicopter involved in the training meets the requirements for a safety vehicle.

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6. Range Series/Complexes. When training complexes are used by the same military organization, use of a single appropriate medical person and safety vehicle with two-way radio communication is authorized; i.e., R-116, R-130, R-210, R-314 range series, Field Medical Service School, Infantry Immersion Trainer, Improvised Explosive Device lanes, Horno Range, or Wilcox Range. F1012. POSITION SAFETY OFFICERS (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:

- a. Vehicle Weapons System. One PSO for each vehicle.
- b. Crew Served Weapons on Static Range. One PSO for every two weapons.
- c. Crew Served Weapons in a Support by Fire Position. One PSO for each weapon.
- d. Dismounted Personnel on Static Range. One PSO for every four shooters.
- e. 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.
- f. CQB. One PSO for each active team in a shoot house.

#### 1013. RANGE AND TRAINING AREA RESTRICTIONS

##### 1. General

a. Firing or bombing will be conducted on authorized ranges and LFAM areas only. This does not prohibit the controlled use of blank ammunition or noisemakers [small, controlled demolition charges of .25 pound of trinitrotoluene or equivalent] in accordance with this Order.

b. The use of chemical ammunition will be in strict compliance with technical manuals and directives. The use of riot agents CS and other obscuration materials shall be in strict compliance with Chapter 7 of this order.

c. Personnel not specifically scheduled to be on ranges or within training areas are not authorized. In addition, recreational activity such as biking, hiking or running are strictly prohibited.

##### 2. POVs and Privately Owned Weapons

a. POVs are prohibited on all live-fire ranges, Artillery Firing Areas, Mortar Firing Areas, training areas and access roads to those areas, unless authorized per range special instructions or approved by the RCO. All authorized POVs shall display an issued POV Pass. Prior to being issued a POV pass, personnel shall submit a command letter (battalion-level) to the RCO justifying the need to utilize a POV in support of training. During authorized hunting and fishing periods, the RCO may authorize hunter POV parking along main roads in training areas. Privately owned motorcycles are not authorized at any time.

b. Privately owned weapons are only authorized on designated recreational ranges or during authorized hunting activities.

c. Carrying military weapons to and from a range in POVs is not authorized without organizational commander's approval.

d. Off road activity by POVs is strictly prohibited.

e. All Terrain Vehicles (ATVs) operators are required to have a current Base ATV Safety Card, and ATVs must be fitted with a spark arrestor.

f. Violations of any vehicle provisions may result in the issuance of a traffic violation and appearance before the MCIWEST-MCB CAMPEN Magistrate and or administrative action or disciplinary action under the Uniform Code of Military Justice.

### 3. Civilians

a. Requests for Unit sponsored functions involving civilian observation requires RCO approval.

b. Family Day requests or events involving civilian participation must be submitted 30 days prior to the event along with higher headquarters endorsement. Complex events involving combined arms and/or aviation activity require a confirmation brief to the RCO.

c. Department of Defense employees, other federal agencies, or government contractors operating within the scope of their employment or contract are not subject to this provision.

d. All media observation/filming requests shall be routed through MCIWEST-MCB CAMPEN Office of Communications (OOC).

(1) OOC shall notify Range Scheduling no later than 48 hours from the event.

(2) Civilian media personnel shall be accompanied by OOC personnel.

(3) Media and OOC personnel shall only observe from the unit OIC and RSO designated viewing area.

(4) All protective equipment must be provided by the requesting unit.

e. All civilian activities shall be in accordance with reference(a) and local restrictions imposed by the RCO.

4. Physical Training (PT). Unit PT in training areas shall be scheduled via the Range Scheduling Office. This includes individual PT.

5. Alcohol. Alcohol is not allowed on ranges or in training areas unless a waiver has been granted. In accordance with reference (1), specific waiver requests for underage drinking must be submitted directly to the CG MCIWEST-MCB CAMPEN.

6. Camp Fires. Camp fires are prohibited unless authorized by the RCO.



1014. WAIVERS TO REGULATIONS. Requests for waivers to the provisions contained in this Order will be addressed to CG MCIWEST-MCB CAMPEN (Attn: AC/S G-3/5) and submitted no less than 30 days prior to the planned event; waivers must include all required endorsements. It is recommended that waiver requests be coordinated with the RCO prior to submission.

1015. MISHAP REPORTING. When a training mishap occurs on a range or in a training area (i.e. vehicle roll over), the RSO shall immediately notify LONGRIFLE by radio or telephone, to include number of personnel and equipment involved. In addition, the unit commander will immediately notify the appropriate chain of command. When ordnance material is involved, freeze all weapons or munitions in place. The mishap will also be reported to the MCB Campen Explosive Safety Officer, and an ordnance malfunction report shall be filed, if required. RCS MC-5102-08 is assigned to this reporting requirement.

1016. MEDEVAC PROCEDURES

1. General. LONGRIFLE must be notified of all medical emergencies occurring within MCIWEST-MCB CAMPEN ranges, training facilities, and offshore operating areas. Designated medical personnel or unit personnel on location shall determine the extent of a medical emergency. Sound judgment will always be paramount in any successful responses to an emergency. The MEDEVAC category shall be relayed to LONGRIFLE. The categories or classifications are as follows:

a. Emergency/Urgent. Requires immediate response. This category includes any injury considered to be life threatening or involving loss of limb or eye sight if not transported in a timely manner. Evacuation method will be determined by Emergency Medical Services (EMS). All MEDEVACs involving maritime operations will be classified emergency/urgent.

b. Priority. Requires timely response. This category includes any serious injury not considered to be life threatening or loss of limb or eye sight. Evacuation method will be determined by EMS.

c. Routine. May or may not require transport. This category includes minor injuries, (cuts, bruises, sprains not involving head or spinal cord injury). MEDEVAC, if required, is accomplished via organic unit assets.

2. Coordination. LONGRIFLE will initiate emergency and priority MEDEVAC requests with MCIWEST-MCB CAMPEN EMS, and remain the principal coordination agency with MCB Campen EMS during the MEDEVAC. In order to facilitate a timely response to training mishaps, incident details such as number of personnel injured, extent of injuries, and vital signs should be relayed to LONGRIFLE. The following information pertains to MEDEVAC responses.

a. EMS will determine the most effective means of evacuation.

b. Naval Hospital, MCB Campen is not trauma-capable.

c. MCB Campen does not have a dedicated military MEDEVAC or Search and Rescue aircraft. In the event EMS determines an air ambulance is required, civilian services will be utilized.

d. The MCB CamPen Fire Department must be on-scene for the arrival of any civilian air ambulance to ensure the victim is prepared for transport and the landing zone is identified and marked in accordance with civilian air ambulance requirements.

e. Victim(s) should not be transported via military aircraft.

f. During a Medevac. All units on base range control safety nets shall continue to monitor the nets but shall not transmit unless they require additional medevac support.

1017. FIRE DANGER RATING (FDR)

1. General. FDRs and associated control measures are promulgated to reduce the danger from wildland fires. FDRs are applicable to all organizations and individuals aboard MCB CamPen at all times. The FDRs are determined by the MCB CamPen Fire Department; restrictions are determined by the AC/S G-3/5.

2. FDRs. FDRs and commonly employed restrictions are contained in Figure 1-3 of this order.

FIRE DANGER RATINGS		
FIRE DANGER RATING	CAUTION TO BE EXERCISED	NECESSARY PRECAUTIONS
LOW	Use normal caution.	**Units SHALL adhere to restrictions promulgated by RCO.**
MODERATE	Use normal caution. Fires will start easily.	**Units SHALL adhere to restrictions promulgated by RCO.**
HIGH	Use extra caution. Fires will start very easily.	The use of tracers may be temporarily suspended. Handheld or grenade launched airborne pyrotechnics ARE NOT authorized. For interior Training Areas - blanks & smoke (used in an ammo can) are authorized in cleared areas. For perimeter Training Areas (Bravo I, Bravo II, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliet, Lima, November and Sierra) ordnance or flame producing devices (including smoking) ARE NOT authorized. Smoking is permitted only in cleared areas or on fire breaks of interior training areas. **Units SHALL adhere to any additional restrictions promulgated by RCO.**



VERY HIGH	Use extreme caution. Fires are very hard to control.	All previous restrictions apply. Authorized areas for increment burning will be identified by the RCO. Smoking is permitted only in cleared areas or on fire breaks of interior training areas. **Units SHALL adhere to any additional restrictions promulgated by RCO.**
EXTREME	Flash condition. This is the <u>highest class of fire danger</u> . Fires started are practically impossible to extinguish and usually continue until danger rating conditions improve or burn themselves out. <u>The utmost caution with fire-producing agents and devices must be exercised at all times.</u>	<u>The firing of high explosives, pyrotechnics, incendiaries, or other ammunition likely to cause fires is prohibited unless specifically authorized by RCO.</u> The use of any type of training/live ordnance (to include blanks), heat or flame-producing devices (heaters, welders, stoves, or open fires) in training areas is strictly prohibited unless authorized by RCO. No off-road activities by vehicles (HMMWVs, etc.) are permitted without authorization from RCO. <u>Firing units will exercise maximum precautions to prevent fires from starting. Smoking shall not be permitted under any circumstances.</u> **Units SHALL adhere to any additional restrictions promulgated by RCO.**

**\*\*The RCO will publish additional restrictions via the Range Control SharePoint site and OPSGRAM. Units should refer to this guidance prior to conducting training.**

**\*\*Note:** Fire breaks are to remain clear to allow transition or access by CPFD personnel when responding to fire emergencies.

Figure 1-3

### 3. Dissemination

a. MCIWEST-MCB CAMPEN Fire Department is responsible for dissemination of the FDR.

b. A notice reinforcing or adding additional restrictions based on the FDR will be available on the ROD SharePoint site and will be promulgated via OPSGRAM.

### 4. Action

a. OICs/RSOs are responsible for adherence to the FDR restrictions.

b. LONGRIFLE shall notify OICs/RSOs of FDR changes as they occur.

1018. PRESCRIBED BURNS. The MCB CamPen Fire Chief may conduct prescribed burning of the Range Complex to mitigate the risk of wildland fires. Requests for prescribed burning on ranges and in training areas should be submitted to the RCO who will coordinate the request with the Fire Chief and AC/S G-3/5. The Fire Chief will coordinate with Environmental Security.

### 1019. WILDLAND FIRES

1. In the event of a wildland fire, the RSO will immediately account for personnel and relocate as required. Notify LONGRIFLE, as soon as possible, stating the exact location and extent of the fire, and its proximity to any



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personnel, equipment or property (to include targetry/equipment/signage). The RSO shall follow the directions of LONGRIFLE and/or the MCB CamPen Fire Department to ensure the safety of personnel and equipment. UNDER NO CIRCUMSTANCES WILL ANYONE ENTER AN IMPACT AREA TO FIGHT FIRES.

2. The RCO will monitor all range and training area fires, and assist the MCB CamPen Fire Chief to safeguard government property and personnel. This will include the control of firing and the removal of units from training areas threatened by fire. Maximum effort will be made not to interfere with scheduled training. However, safety considerations shall take precedence.

#### 1020. HEAT CONDITIONS

1. Atmospheric (weather) conditions should always be a consideration during the planning and RM phase of a training event. The factors associated with heat stress during training aboard the MCIWEST-MCB CAMPEN RTA complex are separate and distinct from cantonment area flag conditions.

2. Heat stress conditions specific to the RTA complex are established at the unit level.

3. The atmospheric conditions should be measured periodically and serve as an on-site, general guideline to the unit OIC and RSO throughout the training event. When a hazardous heat stress condition exists, every precaution should be taken by the OIC and RSO to mitigate the hazard, to include but not limited to: seeking shade, increased water breaks/rest periods, reduction or cessation of activity.

1021. WEATHER WARNINGS. Weather warnings are provided as an advisory for units. However, the severity of weather conditions may dictate evacuation from base personnel.

#### 1. Flood Alert

a. Due to significant amounts of precipitation in the mountains around MCB CamPen, flash flooding may occur. Range Control will monitor flood conditions set by the AC/S G-3/5. The following Alert Conditions apply:

(1) Alert Condition III. Rainfall is reported in Riverside or San Diego Counties of one to two inches on wet or saturated ground; four inches on dry ground; or local flash flood conditions.

(2) Alert Condition II. Rainfall exceeds previous condition and visible flooding is detected upstream; or weather services forecast heavy thunderstorms, flash flood watches, or flash flood warnings.

(3) Alert Condition I. Rainfall exceeds previous condition with bridges, roads, or culverts overflowing with water. Upstream fire departments are reporting local flooding.

b. Unless otherwise directed by the AC/S G-3/5, ranges and training areas shall be secured upon reaching Alert Condition II.

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2. Thunderstorms. Range Control will monitor location of thunder storm activity based on proximity to MCAS CamPen. Units should take precautionary measures based on the following criteria.

a. Thunderstorm Advisory - Thunderstorms with the potential for lightning are occurring or are forecasted to occur within 50 nautical mile (NM) of MCAS CamPen.

b. Thunderstorm Condition II - Thunderstorms with the potential for lightning are occurring or are imminent within 25 NM of MCAS CamPen.

c. Thunderstorm Condition I - Thunderstorms with the potential for lightning are occurring or are imminent within 10 NM of MCAS CamPen.

3. Coastal Hazards

a. Coastal Flood Warning - Coastal flooding is occurring or is imminent in the next 12 hours, which poses a serious threat to life and/or property.

b. Coastal Flood Watch - Coastal flooding is possible in the next 24 hours, which would pose a serious threat to life and/or property.

c. Coastal Flood Advisory - Minor coastal flooding is occurring or is imminent in the next 12 hours, which poses a threat to life and/or property.

d. Storm Surge Warning - Localized heavy flooding due to storm surge caused by a tropical cyclone is occurring or is imminent in the next 12 hours, which poses a threat to life and/or property.

e. High Surf Warning - Destructive, pounding surf poses a danger to those in and near the water and may damage property near the shoreline.

f. High Surf Advisory - Pounding surf poses a danger to those in the water.

g. Rip Current Statement - Describes a risk of rip currents present in the specified area (may be issued as a beach hazards statement).

CHAPTER 2  
ENVIRONMENTAL

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## CHAPTER 2

### ENVIRONMENTAL PROCEDURES

2000. GENERAL. Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN) has many threatened and endangered species, sensitive habitats and cultural resource sites, all which receive protection by federal laws, which are strictly enforced. Environmental laws are applicable to the Marine Corps to the same extent as the general public. Responsibility for compliance with environmental laws extends to unit commanders training aboard the installation. Federal and State agencies may impose significant penalties or restrict the installation operations due to environmental violations. Compliance with environmental regulations ensures the Marine Corps preserves management authority over the land, water, and airspace needed for military readiness.

#### 2001. ENVIRONMENTAL OPERATIONS MAP (EOM)

1. When planning training operations and exercises, it is essential to consider environmental restrictions to ensure successfully achieving all training objectives while complying with environmental laws and regulations. Proper planning in compliance with the Marine Corps Base, Camp Pendleton (MCB CampPen) EOM preserves training facilities for future generations of Marines.

2. Units and individuals operating in training areas are required to be in possession of the Base EOM. The MCB CampPen EOM is available (hardcopy and electronic) through the Director, Environmental Security (ENVSEC), on the Range Operations Division SharePoint site, and in the Range Facility Management Support System library. For questions concerning the MCB CampPen EOM or environmental regulations, contact ENVSEC's National Environmental Policy Act (NEPA) Section at (760) 725-9759/9763.

2002. ENVIRONMENTAL COORDINATION. Supplemental coordination and documentation may be necessary depending on the training activity and potential impacts to the environment. Refer questions concerning applicable environmental regulations to ENVSEC at PNDL\_ENV\_Range-and-Training\_Support@usmc.mil or (760) 725-3360. The following are the coordination lead times recommended for those actions requiring formal environmental documentation from ENVSEC:

- |                         |          |
|-------------------------|----------|
| 1. Company size         | 60 days  |
| 2. Battalion size       | 90 days  |
| 3. Regiment size        | 120 days |
| 4. Larger than regiment | 150 days |

#### 2003. ENVIRONMENTAL CONSIDERATIONS AND RESTRICTIONS

1. Prohibited Activities. The following activities are prohibited on all ranges and training areas:

- a. Burying, dumping, abandoning, or disposing of military munitions, solid waste, trash, rubbish or garbage.

b. Unlawfully discharging of oil, fuel, and other hazardous substances from vehicles, equipment or storage tanks.

c. Killing, injuring, or harassing wildlife. Killing poisonous snakes and other wildlife in self-defense is not prohibited. Contact LONGRIFLE for snake removal.

d. Removing or intentionally destroying threatened or endangered plants or other vegetation. Cutting trees and removing tree limbs. Limit camouflage material to previously fallen vegetation.

e. Driving within the main channel of rivers or creeks regardless of water level/presence.

f. Driving beyond or within areas designated off-limits by Carsonite markers (or other like markers) designating environmentally sensitive areas.

g. Collecting, disturbing, or damaging archaeological sites or artifacts (e.g., arrowheads, projectile points), human bone materials, pottery, and other physical remains of life. If human bone material (to include fragments) is discovered during any operation, the area must immediately be evacuated, leaving the remains intact. Notify LONGRIFLE as soon as possible.

h. Digging fighting holes and/or parking vehicles and heavy equipment under the canopies of trees.

i. Training activities (e.g. bridging operations, engineering operations, construction of fighting positions, etc.) that may result in material being deposited or removed from rivers, creeks, wetland, drainages, arroyos, seasonally ponded areas, beaches, or estuaries. Contact ENVSEC for additional guidance.

## 2. Prohibited Areas

a. Designated historical/archeological sites.

b. Landfills.

c. Installation restoration clean-up sites (contaminated sites).

d. Restoration and erosion control work areas. These areas will be marked with appropriate warning signs and fences.

e. Areas marked off with orange markers, signs, or fences.

f. Burned areas immediately after a significant wildfire. The area may require further assessment and long-term restrictions to support recovery and repairs.

3. Special Management Areas (SMA). MCIWEST-MCB CAMPEN has both permanent and temporary special management areas requiring extra consideration. Permanent SMA are specifically delineated in the EOM.

4. Estuarine/Beach Special Management Zones. Designated Estuarine Special Management Zones (ESMZ) to include coastal lagoons, estuary marshes, and salt



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flats along the entire beach area from San Mateo Creek continuing south to the Santa Margarita River Estuary are subject to special consideration.

a. The following restrictions apply to the ESMZ year round:

(1) Tracked vehicles shall travel as close to the water as possible between Blue Beach and the Landing Craft Air Cushion facility access ramp (11SMS 620 760 to 11SMS 594 797).

(2) Engineering operations, outside of approved landing exercise support, shall be coordinated with ENVSEC prior to the initiation of activities. Generally, earth moving activity at beaches is authorized only for areas of unvegetated sand at least 300 meters from posted nesting areas.

(3) Boat operations are not authorized in the lagoons and estuaries. However, small boats may be permitted in the Santa Margarita Estuary between 16 September and 1 March with prior approval from ENVSEC.

b. Based on the nesting habits of a number of endangered species within the ESMZ, the following restrictions apply between 1 March and 15 September:

(1) Activities involving smoke, pyrotechnics, loud noises, blowing sand, and large groupings of personnel (14 or more) shall remain at least 300 meters away from fenced or posted nesting areas. All other activities shall be kept at least five meters away.

(2) Foot traffic involving less than 14 personnel shall approach no closer than five meters to posted nesting areas. Unit hikes shall remain on hard packed sand as close to the water as possible. When passing posted nesting areas, minimize all noise.

(3) Vehicle operations will be kept to a minimum, and remain on hard packed sand. Vehicles shall remain five meters away from posted nesting areas and lagoons. Speeds shall not exceed 25 mph.

(4) Vehicle operations are not authorized inside the fenced areas on the edge of the bluff between Aliso and French Creeks (White Beach).

(5) Aircraft shall maintain an altitude of 300 feet above ground level or more unless conducting flight operations to established aviation training facilities (Vertical Takeoff and Landing Pad/Landing Zones/etc.).

(6) Landing Craft Air Cushion (LCAC) operations are not authorized between the LCAC access ramp on White Beach (11SMS 59195 80096) and the southern end of Blue Beach except when directly entering or exiting the LCAC facility access ramp.

5. The Sierra Training Area. Due to the presence of archaeological resources in the Sierra Training Area, the following restrictions apply:

a. Military training activities within Sierra 1 - including bivouac, command post, and field support activities - must minimize ground disturbance to the first 20 inches of soil.



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b. For training activities within the Sierra Special Management Area, or involving vehicles and heavy equipment off the established roads within the Sierra 1, contact ENVSEC Cultural Resources Section at (760) 725-9738/3823 two weeks prior to schedule pre and post training exercise archaeological monitoring and conditions assessments.

c. Greywater operations are authorized in the Sierra 1 if the training unit uses a grey water containment source that does not require ground disturbance, such as bladders or water trailers.

d. Training is prohibited in the treated wastewater percolation ponds and the fenced off environmental rehabilitation area to the north of Sierra 4 (Grid 11SMS 460 950).

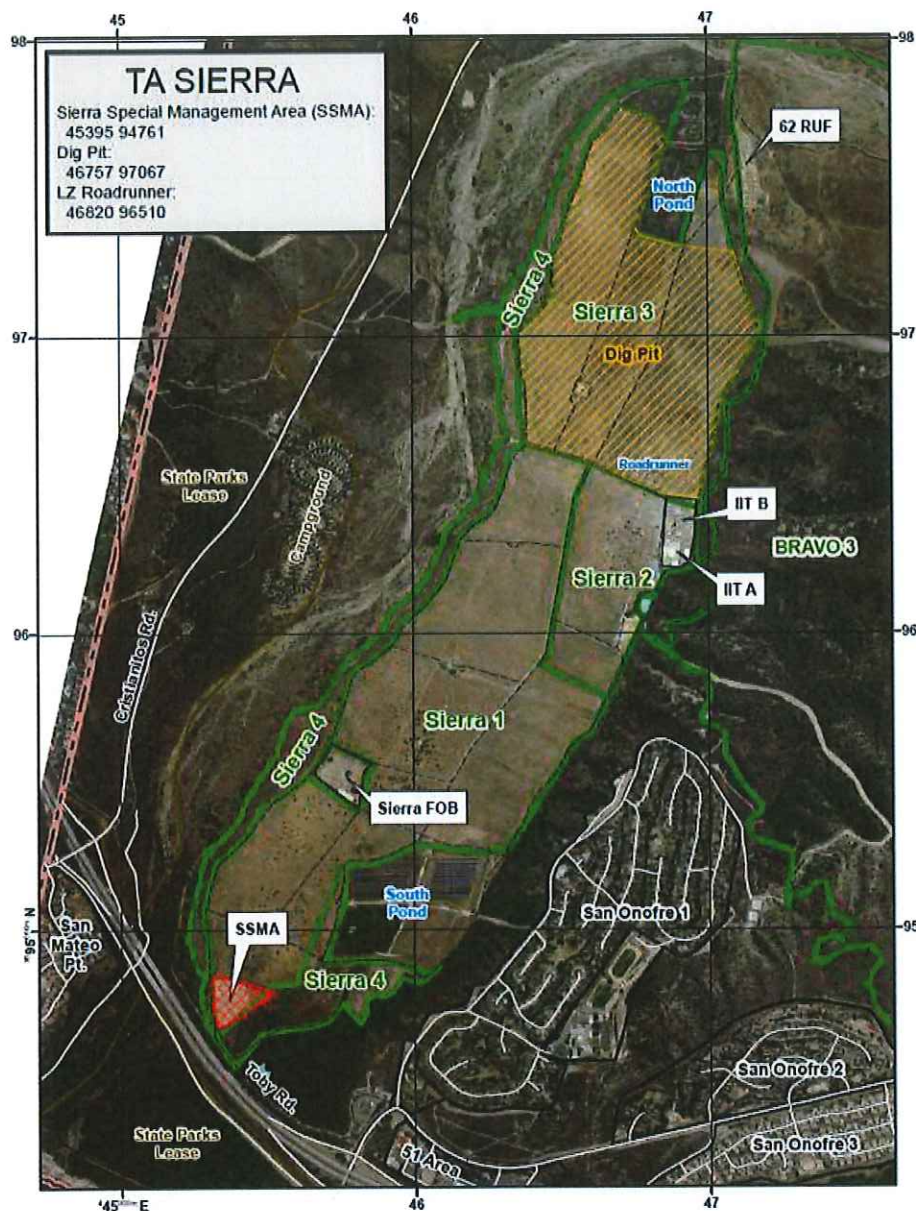


Figure 2-1

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2004. FIELD DRINKING WATER SUPPLY

1. Water obtained from faucets and fixtures within cantonment areas and from overhead fill stations in the 21, 26, 43, 52, and 63 Areas is potable and safe for use. Potable water may also be obtained from Marine Corps Base, Camp Pendleton (MCB CamPen) fire hydrants, subject to prior approval from MCB CamPen's Water Resources Division and use of a backflow prevention device when connected.

2. Water acquired from lakes and streams on MCB CamPen requires treatment prior to use and prior approval from MCB CamPen's Water Resources Division at (760) 763-7220 or (760) 725-3567.

3. Units may discharge unused product water, reject water, and/or brine solution to land in properly sized percolation pits, provided the discharge does not come into contact with other materials or substances that could cause migration of contaminants into groundwater or surface waters. Percolation pits must be sited outside of restricted areas as identified in the EOM, and also comply with the following conditions:

a. Beach training event percolation pits must be above the high tide line and of sufficient size to contain all product water and brine solution.

b. Surface water training event percolation pits must be at least 50 meters away from any surface waters including seasonal watercourses (e.g. earthen drainage channels, intermittent streams).

2005. GREYWATER DISPOSAL. Wastewater from field mess, field showers, and laundry activities may be discharged to land in percolation pits with prior coordination and written approval from ENVSEC Wastewater at (760) 725-0141 or 725-9761. Greywater discharged in this manner must fully percolate within the authorized discharge site and not be allowed to flow to surface waters or dry watercourses. Greywater disposal must also comply with Preventative Medicine Regulations and Standards for military field operations.

2006. HAZARDOUS MATERIALS, REFUELING, SPILL PREVENTION AND SPILL RESPONSE

1. Storage. Hazardous materials must be stored in approved, closed, and properly labelled, leak-proof containers. All hazardous material storage containers, to include fuel bladders, tanker trucks, SIXCONS, flat rack refueling capable vehicles, fuel pods, and 55 gallon drums, must be stored within properly sized and impermeable secondary containment. Bulk fuel storage is not authorized on any beach area.

2. Spill Contingency Plans. Bulk fuel storage in excess of 55 gallons (aggregated volume) requires a spill contingency plan approved by ENVSEC (Spill Planning and Prevention) prior to the start of training. The plan must identify fuel storage and refueling locations, spill prevention measures, emergency response procedures, and responsibilities. A copy of the plan must be posted in a prominent location for ready access and use by personnel in the event of a spill. Contact ENVSEC (Spill Planning and Prevention) at (760) 725-9743/9768 for plan approval or more information.

3. Refueling. Units shall identify planned refueling locations in their spill contingency plans and use designated refueling sites to the maximum



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extent possible. Appendix F contains a list of designated aircraft refueling sites, which also serve as designated refueling sites for ground equipment. Refueling is not authorized on any beach area. Para drops of fuel are not authorized anywhere on Base.

4. Spill Response. Units are responsible for initial response and clean-up. To effectively respond, units shall maintain spill kits appropriately sized and configured for their training activity. All hazardous material spills within a training area must be immediately reported to LONGRIFLE. LONGRIFLE will notify ENVSEC and the MCB CamPen Fire Department as necessary. Contact ENVSEC (Spill Planning and Prevention) at (760) 725-9743/9768 for additional guidance, clarification or questions.

2007. ENVIRONMENTAL TRAINING AND SUPPORT. Individual Range Safety Officer or unit environmental training is available upon request from ENVSEC NEPA Section. Beach and Estuary environmental compliance training is provided by ENVSEC Resources Management. Submit support requests to ENVSEC at PNDL\_ENV\_Range-and-Training\_Support@usmc.mil or (760) 725-3360.



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CHAPTER 3

SCHEDULING PROCEDURES

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## CHAPTER 3

### SCHEDULING PROCEDURES

#### 3000. GENERAL

1. Scheduling. The Range Operations Division (ROD), Range Scheduling Office is located aboard Marine Corps Air Station Camp Pendleton in Building 2399, and serves as the sole scheduling agency for the Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN) Range Complex.

a. Normal hours of operation for the Range Scheduling Office are 0700 to 1600 Monday through Thursday, and 0700 to 1500 on Friday.

b. The Range Facility Management Support System (RFMSS) is the approved Marine Corps Range and Training Areas (RTA) scheduling and management tool. To schedule a range, training area, or maritime operating area the Range Control Scheduling Office must receive a RFMSS data entry in accordance with the applicable scheduling precedence as outlined in Figure 3-1.

c. Access to the MCIWEST-MCB CAMPEN RFMSS database can be established by submitting a RFMSS 'User' or 'Read-Only' role account request via <https://rfmss.belvoir.army.mil/>. Individuals must attend local RFMSS training prior to account approval. For assistance contact the Range Scheduling Office via email. Expect one to two business days for account processing and approval.

d. If there is a technical reason for not being able to access RFMSS, a Training Area Request (TAR) may be submitted to the Range Scheduling Office using the following methods; as an e-mail attachment, or hand delivered to the Range Scheduling Office. The Marine Corps base, Camp Pendleton (MCB CampPen) TAR is provided on the MCB CampPen web site and on the ROD SharePoint site.

e. The latest a scheduling request can be submitted is 1200 the day prior to the event. For same day scheduling additions contact the Range Operations Branch, LONGRIFLE.

2. Modifying or Canceling. Once ground ranges, training facilities, airspace, and/or sea space have been scheduled, it is the responsibility of the unit scheduled to use the facility to conduct its training during the allotted time period. Units should monitor the request status within RFMSS and acknowledge any communications from the Range Scheduling Office as range status may change. To modify a scheduled range time, the unit must notify the Range Scheduling Office via e-mail. Cancellation of scheduled events should be executed through RFMSS by the requesting unit.

3001. SCHEDULING PRECEDENCE. Scheduling precedence is based on the priority level of each unit and the subsequent training request submission date allowed. Priority one units may submit a training request up to 180 days prior to the event. At 120 days prior, priority one and two units have equal precedence, and both units may submit training requests; this pattern continues until 30 days prior when all units have equal precedence. Units submitting requests prior to their authorized training request submission

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date will be disapproved. In cases of equal precedence, the first unit to request the range or training area will be approved.

SCHEDULING PRECEDENCE			
PRIORITY	UNIT	REMARKS	SUBMISSION DATE
1	United States Marine Corps Formal Schools	School of Infantry, Marine Corps Recruit Depot, Weapons Field Training Battalion, Marine Light Attack Training Helicopter Squadron 303, Field Medical Training Battalion, and Assault Amphibian School Battalion	Up to 180 Days Prior
2	Marine Expeditionary Unit or Large Scale Exercises/ Division Schools/ Battalion Level MCCRE/Expeditionary Operations Training Group/High Mobility Artillery Rocket System	Administrative control/operational control units will schedule via higher headquarters for submission to Range Scheduling	Up to 120 Days Prior
3	USMC Active and Reserve/ Active United States Navy/ Tier 1 or Tier 2 Units	Conducting Military Training	Up to 90 Days Prior
4	USN Reserve/United States Army Active and Reserves/United States Air Force Active and Reserve/ National Guard/Coast Guard	Conducting Military Training	Up to 60 Days Prior
5	Base Civilian Agencies/Civilian Law Enforcement/ Non-federal Entities/ Recreation	Non-Military Training	Up to 30 Days Prior

Figure 3-1

### 3002. PRIORITY USE FOR ZULU AND WHISKEY IMPACT AREAS

1. To increase training efficiency, priority use for the Zulu and Whiskey Impact Areas will be implemented for range and airspace utilization as follows:

a. Aviation Priority Use Zulu Impact Area(R440). Aviation live fire operations have priority use on the first three Wednesdays and Thursdays of each month. Additionally, Marine Corps reserve aviation units will have priority use one (1) Saturday per month, from 1400-2359.

b. Aviation Priority Use Whiskey Impact Area (R220). Aviation live fire operations have priority use Monday through Friday, 1400-1700 and 2000-2300.

c. Ground operations have priority use of the Zulu and Whiskey Impact Areas during all other times.

2. Ground units desiring to conduct Tactical Air Control Party (TACP) or Joint Terminal Attack Controller (JTAC) operations shall schedule the event on air priority days. Parachute operations will not be afforded priority on



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air priority days. Air priority will not be granted for requests received less than seven days prior.

3. Aviation operation requests for use of the Zulu and Whiskey Impact Areas outside of aviation priority windows may be submitted but will not be approved until seven days prior to the event.

4. Key events (e.g., Marine Corps Combat Readiness Evaluation, Distinguished Visitor Demonstrations, FIREXs) should be coordinated with the Range Control Officer (RCO) as soon as possible in advance to request exemption to the priority use policy.

### 3003. RANGE AND TRAINING AREA CONSIDERATIONS

#### 1. Scheduling

a. Individual training facilities (i.e., artillery firing areas, combat towns, confined area landing sites, and DZs) are not inclusive of the training areas and must be scheduled separately.

b. Range and Training Area Capacity. A maximum of five military plus three non-military units may be scheduled in a training area, RM dependent or as stated in the restrictions tab in RFMSS. Non-military units shall not be scheduled concurrently with mechanized units or with live fire activity.

c. Exceptions to the above capacity restrictions may be considered on a case-by-case basis. Units requesting co-use must submit a detailed plan including an overlay and RM for RCO approval.

d. Units desiring co-use of a single unit capacity training facility must receive approval by the RCO.

(1) Both units must submit a request, via email, to the RCO that details how both units can accomplish their training safely. Both requests must be submitted seven days prior to the start of the event; if the request is not received prior to the deadline, co-use will automatically be denied. Only the RCO can approve co-use.

(2) Co-use by military and civilian units/organizations shall not be authorized.

e. Civilian organizations and non-federal entities authorized to operate on MCB CampPen must submit their requests through the Operations Division, Assistant Chief of Staff (AC/S), G-3/5 at (760) 763-4988/4985.

f. Agencies contracted or subcontracted to perform work within the MCIWEST-MCB CAMPEN RTA must have their requests submitted through RFMSS via the sponsoring governmental organization

2. Ground Training Overlays. Unless the overlay is on permanent file with the RCO, units requesting training areas for Hikes, Unit physical training, Land Navigation Courses, Convoy Courses, Chlorobenzalmalononitrile (CS) in the training areas, Improvised Explosive Device (IED) Penalty Training and Environmental Surveys that access ranges or Non-dudged Impact Areas must submit an overlay of the proposed route or point(s) to the Range Scheduling

Office in accordance with the timelines outlined in Figure 3-2. The format for overlays can be obtained in the RFMSS library or on the ROD SharePoint site.

3. Aviation Training Overlays. Units requesting training areas for Forward Arming and Refueling Point (FARP) Operations, Special Patrol Insertion/Extraction (SPIE) Operations, Vehicle/Air Interdiction and Convoy Escort shall submit an overlay of the proposed flight patterns and coordinating brief sheets (as required) to the Range Scheduling Office in accordance with the timelines outlined in Figure 3-2. The format for air overlays can be obtained in the RFMSS library or on the ROD SharePoint site.

4. Environmental. For environmental considerations and requirements associated with training evolutions, units must submit a request for environmental impact review to Range Training Area Management Division at (760) 725-6010 prior to scheduling.

5. Prior Coordination Requirements. The following facilities/areas require units to make prior coordination before submitting a request in RFMSS. Confirmation of coordination with the appropriate personnel must be included within the RFMSS request.

a. Recreational Beaches. Units must receive approval from the AC/S Marine Corps Community Services for the use of Green Beach and Del Mar Beach. Contact the San Onofre Recreation Beach Office at (760) 725-7313 or the Del Mar Recreation Beach Office at (760) 725-2134/2313. Submit requests for recreational beaches 30 days prior to the planned event to ensure mandatory coordination with MCCA is conducted.

b. State Park Lease Areas. San Onofre State Beach and San Onofre State Park are long-term lease areas. They are available for military training and its use is encouraged. Requests for the use of state park lease areas shall be made at least 30 days in advance to Range Scheduling to ensure mandatory coordination with state park officials.

c. Field Medical Training Battalion (FMTB) Training Facility. The FMTB Field Training Complex (Camp Devil Doc located at grid 11S MS 651 782) is designated for training United States Naval medical personnel and students. Contact the FMTB at (760) 725-2559 to receive approval.

d. Cantonment/Built-up Areas. Use of munitions (e.g., blanks, pyro, smoke, etc.) in cantonment areas must be approved by the RCO, as well as the appropriate Area Commander. Cantonment areas are not scheduled in RFMSS.

e. Administrative Landing Zones. Obtain approval from the appropriate Area Commander.

f. 53 and 62 Regimental Urban Facilities. Obtain approval from the 5th Marine Regiment or 1st Marine Regiment as applicable.

g. Infantry Immersion Trainer. Obtain approval from the Training Support Division (TSD), (760) 725-7632.

h. Home Station Training Lanes (HSTL). Obtain approval from the HSTL site lead at (760) 763-3634.



i. Tactical Site Exploitation (TSE). Obtain approval from the TSE site lead at (760) 763-3634.

j. R-303. Obtain approval from the Naval Expeditionary Medical Training Institute at (760) 725-7121.

k. R-116 Complex. Obtain approval from the Naval Special Warfare Center at (725) 725-0103 or (619) 537-3409.

Event	Required Time Lines and Documents	
Non-standard LFAMS	Not in Dedicated Impact Area - 60 working days prior to training evolution, submit all SDZs, Concept of Operations & signed RM.	
	In Dedicated Impact Area - 14 working days prior to training evolution, submit all SDZs, Concept of Operations & signed RM.	
MFA's and Non-Standard MP's	14 working days prior to event, submit all SDZs, Concept of Operations & signed RM.	
Unmanned Aircraft Systems (UAS)	Standard UAS Airspace Coordination Areas (ACA) - 14 working days prior to event, submit UAS brief sheet. Launch/Recovery Site needs to be scheduled separately from the ACA.	
	Adhoc or Non-Standard UAS Airspace Coordination Areas (ACA) - 14 working days prior to event, submit UAS brief sheet and overlay. Launch/Recovery Site needs to be scheduled separately from the ACA.	
TACP	Standard events - 14 working days prior to event, Forward Air Controller (FAC)/JTAC will submit brief sheet. A Range Safety Specialist SHALL conduct a face-to-face brief with FAC/JTAC on first day of TACP.	
	Non-standard events - 14 working days prior to event, FAC/JTAC will submit brief sheet and overlay. A Range Safety Specialist SHALL conduct a face-to-face brief with FAC/JTAC on first day of TACP.	
Simulated Close Air Support (SIMCAS)	Standard ACA - 14 working days prior to event, FAC/JTAC will submit brief sheet.	
	Non-standard ACA - 14 working days prior to event, FAC/JTAC will submit brief sheet and overlay.	
Ground Overlays	14 working days prior to event, submit overlays for all CS in the training areas, IED Penalty Training, Non-Permanent Hike, Non-Permanent Unit PT, Non-Permanent Convoys and Environmental Surveys that access ranges or Impact Areas.	
	14 working days prior to event, submit overlays and point graphic for all Non-Permanent Land Navigation Courses.	
Aviation Training	14 working days prior to event, submit overlays for all SPIE operations, Vehicle/Air Interdiction and Convoy Escort.	
	14 working days prior to event, submit brief sheet for Aerial Sniper operations.	
	14 working days prior to event, submit overlays and brief sheets for all FARP operations (with or without air).	
Parachute Operations	7 working days prior to event, submit brief sheets for standard parachute operations.	
	14 working days prior to event, submit brief sheet and aircraft track overlay (with release points) for HAHO Offset parachute operations. HAHO Offset requires a confirmation brief with the RCO NLT 14 working days prior to jump operations.	
Airspace requests	R2503A/B	Five working days prior to event, submit request for activation of airspace between the hours of 0000 and 0559
	R2503C	20 working days prior to event, submit request for activation of airspace.
	R2503D	35 working days prior to event, submit request for activation of airspace.



Figure 3-2

6. Airspace and Aviation Ranges/Facilities. Specifics concerning CamPen Special Use Airspace and aviation training activities, ranges, and facilities are provided in Chapter 4 of this Order. It is recommended that units schedule aviation ranges/facilities prior to requesting aviation support.

7. Specific Training Event Requirements and Timelines. In order to safely deconflict activities, specific events require informational products and/or additional coordination that must be received by Range Scheduling in accordance with figure 3-2. All required ranges, training areas, airspace or facilities required for the training event must be scheduled prior to submission.

3004. CONTRACTOR SUPPORTED RANGES AND FACILITIES

1. Units desiring to train on contractor supported ranges must include contractor times or specifically state that "no contractors" are needed in the RFMSS request. Requests that do not include contractor times or state "no contractors" will be disapproved. Once a request is approved, the unit shall contact the Training Support Center (TSC) at (760) 763-8244 at least 14 working days prior to the planned training to confirm support and program targets. The RCO is the final approval authority on all Contract Operations and Maintenance Training Systems (COMTS) range training scenarios, not the contractor. TSC will reconfirm support requirements with the unit a minimum of two working days prior to the unit actually using the range.

2. Questions and comments related to COMTS contractor ranges shall be referred to the TSC at (760) 763-8244.

3005. CONTROLLED SIMULATORS AND TRAINING DEVICES. Controlled simulators and training devices can be scheduled through RFMSS using the "TSD" firing desk or coordinated directly with the TSD at (760) 725-4444.

1. Combat Convoy Simulator.
2. Ground Based Observation and Surveillance System.
3. HUMVEE Egress Assistant Trainer.
4. Base Training Center.
5. Marine Air Ground Task Force Integrated Staff Training Center.
6. Operational Driver Simulator.
7. Supporting Arms Virtual Trainer.
8. Mine Resistant Ambush Protected Egress Trainer.
9. Modular Amphibious Egress Trainer.
10. Battle Simulation Center.
11. Combined Arms Simulator Trainer.

12. Training Set Fire and Observation Trainer.

3006. FIELD MESS NIGHTS (WARRIOR NIGHTS). Warriors Cove on Gold Beach, Deer Park near Camp Horno and Red Beach are designated areas to conduct Field Mess/Warrior Nights. Consumption of alcohol, use of gas grills, use of fire pits and civilian guests are authorized in accordance with the Special Instructions.

1. In accordance with reference (1), request to waive the minimum age requirement for the consumption of alcohol aboard the Installation must be made via separate correspondence to the Commanding General MCIWEST-MCB CAMPEN.

2. Field Mess/Warrior Nights will not be afforded scheduling precedence as outlined in Figure 3-1. Requests for Field Mess/Warrior Nights will be processed no earlier than 30 days prior to event.

3. Unit must contact RCO for the beach access via Red Beach gate.

3007. UNIT SPONSORED FAMILY DAYS

1. Family Day events must be scheduled as a 'Family Day' in RFMSS, and identify requested non-live fire and/or live fire activities. Additionally, unit will schedule the appropriate range(s) and training area(s) within RFMSS under 'Family Day' event. For Family Day demonstrations involving the integration of aviation assets and/or indirect fire, the unit shall conduct a confirmation brief with the RCO no later than seven working days prior to the event. All live fire participants shall be at least 12 years old; protective equipment will be provided by the unit; and the unit shall assign one Position Safety Officers for every weapon.

2. Live fire activities authorized for Family Day events are limited to:

- a. Service handguns
- b. Service rifles (semiautomatic only)
- c. Service shotguns

3. Family members are prohibited from firing crew served weapons.

CHAPTER 4

AIRSPACE AND AVIATION OPERATIONS

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## CHAPTER 4

### AIRSPACE AND AVIATION OPERATIONS

#### 4000. GENERAL

1. This chapter describes airspace, aviation facilities, and aviation operations within the Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN) Range Complex. Detailed procedures and a graphic depiction of specific areas designated for aviation use can be found in the Aviation Special Instructions on the Range Operation Division (ROD) SharePoint site. The instructions in this Chapter are based upon current Department of Defense, Department of the Navy, and Federal Aviation Administration (FAA) policies and regulations. Nothing in these instructions shall prevent the exercise of sound judgment to preserve lives and property, or to ensure the safety of personnel.

2. Range Complex Air Operations. The MCIWEST-MCB CAMPEN Range Complex is a Visual Flight Rules operating area. Aircraft operating within the airspace shall do so concurrently with other aircraft under the provisions of "see and avoid." LONGRIFLE will provide procedural flight following and safety alerts to participating aircraft relative to live fire or hazardous range activity, to the maximum extent possible. However, range and training area familiarity, a review of the daily training schedule, and enhanced aircrew vigilance are critical to flight safety and success while operating within the complex. Although the requirement to "see and avoid" other aircraft rests solely with the pilot, LONGRIFLE will provide advisories in relation to the proximity of other observed aircraft, workload permitting.

3. In addition, and by virtue of MCIWEST-MCB CAMPEN's geographic location and proximity to civilian airports and the coastline, airspace incursions by unauthorized civilian aircraft are not uncommon. Unintentional intrusions by civil aircraft into MCB Camp Pendleton (CampPen) Special Use Airspace (SUA) take place routinely. Due to the high volume of traffic, both civil and military in the area, potential for mid-air collision is considered to be high. Unauthorized civil aircraft observed within MCB CampPen's restricted airspace should be reported to LONGRIFLE.

#### 4001. SPECIAL USE AIRSPACE (SUA)

1. General. Restricted Area R-2503 complex has been established and delegated by the FAA to support hazardous training activities at MCIWEST-MCB CAMPEN. MCIWEST-MCB CAMPEN has been designated as the using agency for the restricted area complex. MCB CampPen maintains sole approval and scheduling authority for all users and activities to include ground, sea, and aviation operations taking place within this airspace.

2. The R-2503 SUA is subdivided into R-2503A, R-2503B, R-2503C and R2503D. R-2503A overlies MCB CampPen's coastal area and extends offshore one nautical mile, surface to 2,000 Mean Sea Level (MSL). Its eastern boundary coincides with the western boundary of R-2503B. R-2503B is the airspace from the surface to 15,000' MSL overlying MCB CampPen's impact areas. R-2503C overlies the northern two-thirds of R-2503B from 15,000' MSL to 27,000' MSL. R-2503C is for use by artillery units only to facilitate high angle, high

altitude firing. R-2503D overlies R-2503A from 2,000 to, but not including, 11,000' MSL. MCB CamPen SUA is depicted in Figure 4-1.

3. Published hours of operation for Restricted Airspace

a. The R-2503A and R-2503B sub-parts are 0600 to 2359 (local) daily, and other times by Notice to Airmen (NOTAM). Units desiring to conduct hazardous training activities from 0000 to 0559 must notify the MCB CamPen Range Scheduling Office at least five working days in advance to extend training operations past 2359 (local time).

b. The R-2503C sub-part is available 40 hours each year when activated via NOTAM. In order to activate R-2503C, requests must be submitted to the Range Scheduling Office at least 20 working days in advance.

c. The R-2503D sub-part is activated via NOTAM, and limited to 20 days per year between the hours of 0600 to 2359 hours local time, and no more than 90 days per year between 0001 and 0559 local time. Exercise planners shall notify the Range Scheduling Office 35 days in advance of R-2503D activation dates. Priority use of R-2503D is for artillery firing. Non-artillery requests will be taken on a case-by-case basis.

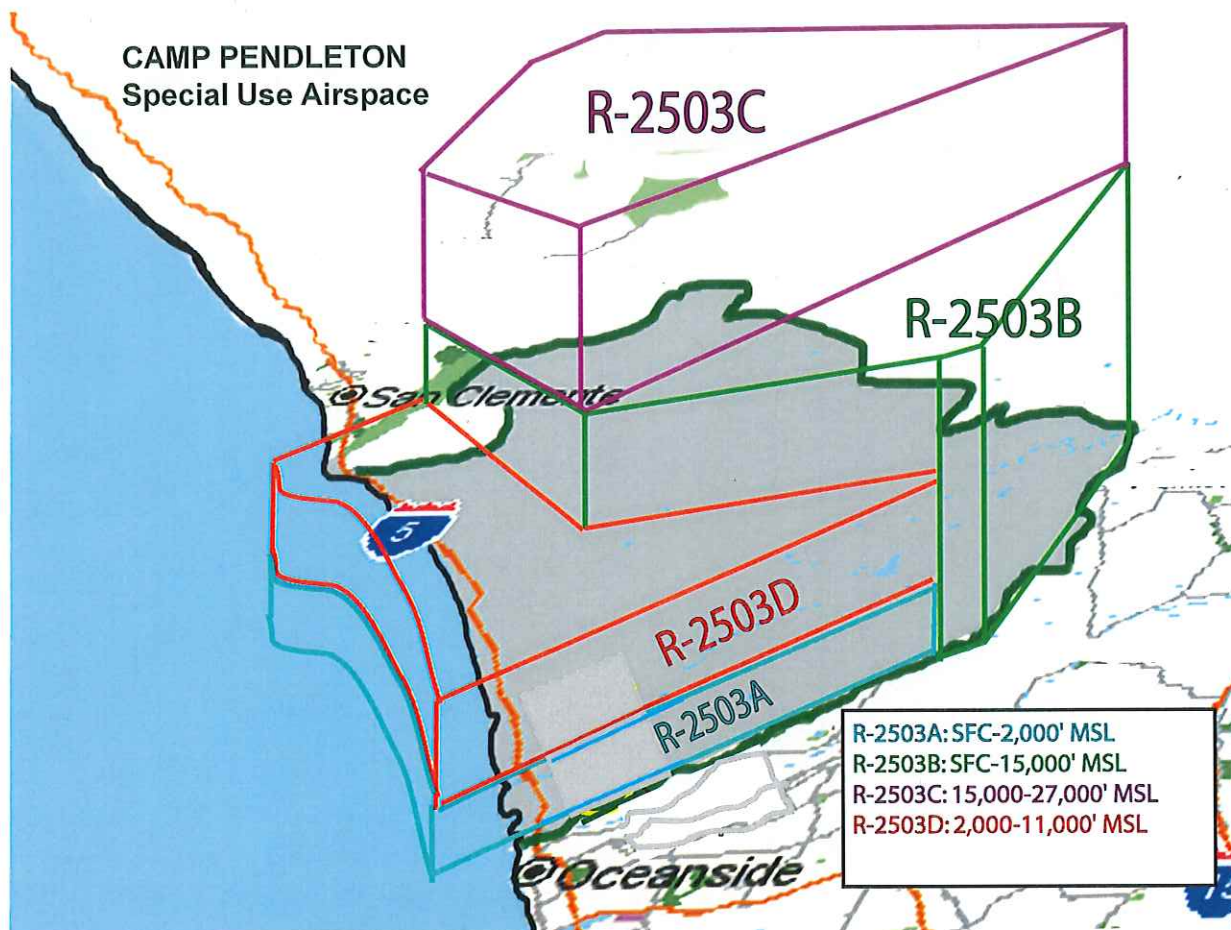


Figure 4-1



4. Air Range Safety Briefing

a. To ensure the safe conduct of aviation training, pilots must receive an air range safety brief prior to operations within MCIWEST-MCB CAMPEN SUA. For aircrew conducting limited operations within the SUA, individual or one-time event briefs may be coordinated with the Scheduling Office. For units with enduring training requirements involving routine use of the MCIWEST-MCB CAMPEN SUA, squadron commanders may qualify their pilots annually through the Air Range Safety Certification process. All pilots must be certified annually or upon return from deployment. Information regarding this process is available through the Scheduling Office or on the Range Operations share point site.

b. Pilots or aircrew not listed as certified, or having received an event brief, will not be authorized operations within the SUA.

4002. FEDERAL AIRWAY STRUCTURE. MCB CamPen's restricted airspace and training ranges are surrounded by highly congested airspace recognized by the FAA as some of the busiest and most complex in the country. Numerous Federal Airways surround MCB CamPen, but are most predominant on the Western border of the SUA. Military users of MCB CamPen SUA should be extremely cautious and vigilant when operating in the vicinity of the federal airway structures surrounding the Base.

4003. OVER FLIGHT/NOISE ABATEMENT RESTRICTIONS

1. San Onofre Nuclear Generating Station (SONGS). SONGS is located at grid coordinate 11 SMS 482 925; latitude 33 22' 10"N, longitude 117 33' 20"W. SONGS shall not be overflown at any time.

2. Endangered Species Nesting Areas. Between 1 March and 15 September, aircraft shall maintain an altitude of 300 feet above ground level (AGL) or more above Estuarine/Beach Special Management Zones unless conducting flight operations to established aviation training facilities (VTOL Pad/Landing Zones/etc.).

3. A minimum altitude of 500' AGL shall be maintained when flying over non-participating personnel, housing areas, cantonment areas, San Onofre State Beach, the MCB CamPen Golf Course, the Naval Hospital, and the Ammunition Supply Point.

4. Aircraft shall maintain a minimum altitude of 2500 feet AGL over the following municipalities:

- a. Oceanside
- b. San Clemente
- c. Fallbrook

4004. MARINE CORPS AIR STATION (MCAS) CAMP PENDLETON



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1. General. MCAS CamPen airspace, facilities, support capabilities, and hours of operation are listed in current Flight Information Planning publications and reference (1). Requests involving MCAS CamPen must be coordinated and approved by the Commanding Officer, MCAS CamPen.

2. MCAS CamPen Airspace

a. Portions of the MCAS CamPen Class D Airspace are located within the R2503A and R2503B airspace. When the Air Station is closed, the MCAS CamPen Class D airspace is inactive, and MCIWEST-MCB CAMPEN Range Control is responsible for all activity within those portions of the R-2503A and R-2503B. When the Air Station is open, aircraft must contact the MCAS Air Traffic Control Tower for clearance into the Class D airspace.

b. A number of MCIWEST-MCB CAMPEN aviation training facilities are located within the MCAS CamPen Class D airspace. Aviation training facilities within the MCAS Class D Airspace shall be scheduled with the MCIWEST-MCB CAMPEN Range Scheduling Office. Operations within the airspace shall be coordinated no later than seven working days prior with Range Scheduling.

4005. AIRSPACE CONTROL PROCEDURES

1. General. To operate within MCIWEST-MCB CAMPEN SUA, aircraft shall check in and out with LONGRIFLE on the primary ultrahigh frequency (UHF) or very high frequency (VHF) frequency. Aircraft must maintain communication with LONGRIFLE at all times while operating within MCB CamPen airspace. All aircraft utilizing ranges will monitor the guard frequency (121.5 VHF/243.0 UHF). Alternate discrete range safety frequencies may be requested to support individual training activities. (NOTE: Due to the mountainous terrain within MCB CamPen, some low altitude communication blind spots exist in areas around MCB CamPen. Therefore, aircraft may have to climb to obtain positive communication with LONGRIFLE).

2. Check-In/Out. Aircraft checking in with LONGRIFLE shall provide call sign, location, number and type aircraft, planned activity, and ordnance (if applicable). Aircraft/flights working with Tactical Control Agency [e.g., Tactical Air Control Party (TACP), Air Liaison Officer, etc.] to conduct TACP, Simulated Close Air Support (SIMCAS), or Para-drop operations will be switched to the appropriate controlling frequency. All aircraft shall check out with LONGRIFLE when departing the SUA. Aircraft checking out shall provide call sign, ordnance expended (if applicable), and departure direction.

3. Radio Frequencies. Aircraft must maintain two-way communications with LONGRIFLE while operating in the SUA. LONGRIFLE utilizes the following frequencies for control of operations within MCB CamPen airspace.

a. UHF - 310.3 (primary)/ 305.925/255.2/249.9 (secondary).

b. VHF - 123.2 (primary).

c. Frequency Modulation - 40.35 (primary)/ 30.35 (secondary).

4. Weather. The MCIWEST-MCB CAMPEN Range Complex SUA is a Visual Meteorological Conditions (VMC) operating area.

5. Fixed Wing Operations. Fixed-wing operations must be coordinated and scheduled 14 days in advance. Following check-in with LONGRIFLE, fixed-wing aircraft operations within MCB CamPen SUA will be directed to hold over the highest vertical hazard, and shall remain within the lateral and vertical boundaries of the scheduled sub-part of restricted airspace.

6. Transit Routes. Helicopter and MV-22 aircraft in conversion mode, not engaged in specific training activities, shall transit using the routes listed below unless otherwise coordinated with LONGRIFLE. To transition to training facilities, aircraft should take the most direct route from the transit routes to the training facility. Transit routes are depicted in Figure 4-2. These routes are subject to temporary closures when events such as artillery live fire are in progress.

a. Offshore

(1) Route of flight. Proceed one nautical mile (NM) offshore abeam the following check points. Call LONGRIFLE for transit to beach training facilities.

(2) <u>Checkpoints</u> .	(Abeam)	San Clemente Pier	11 SMS 429 966
		San Mateo Point	11 SMS 439 932
		Power Plant	11 SMS 469 912
		CAL Site 20	11 SMS 535 877
		OCN VORTAC	11 SMS 589 772

b. Basilone Route

(1) Route of flight. Follow Basilone Road between the intersection of I-5 freeway to the intersection of Basilone and Roblar Roads; remain on the right side of the road to the maximum extent possible. Due to the large number of ranges located along Basilone Road, remain as close to the road as possible.

(2) <u>Checkpoints</u> .	I-5 and the Northern Base Boundary	11 SMS 449 952
	Ammo Supply Point	11 SMS 604 917
	Basilone/Roblar Roads	11 SMS 662 902

c. Case Springs Route

(1) Route of flight. Follow the power lines abeam the following checkpoints. Remain clear of live fire ranges and concurrent aviation operations.

(2) <u>Checkpoints</u> .	LZ 64	11 SMT 479 017
	Devil	11 SMT 539 040
	CAL Site 10	11 SMT 595 018



CAL Site 8

11 SMS 630 986

CAL Site 5

11 SMS 719 959

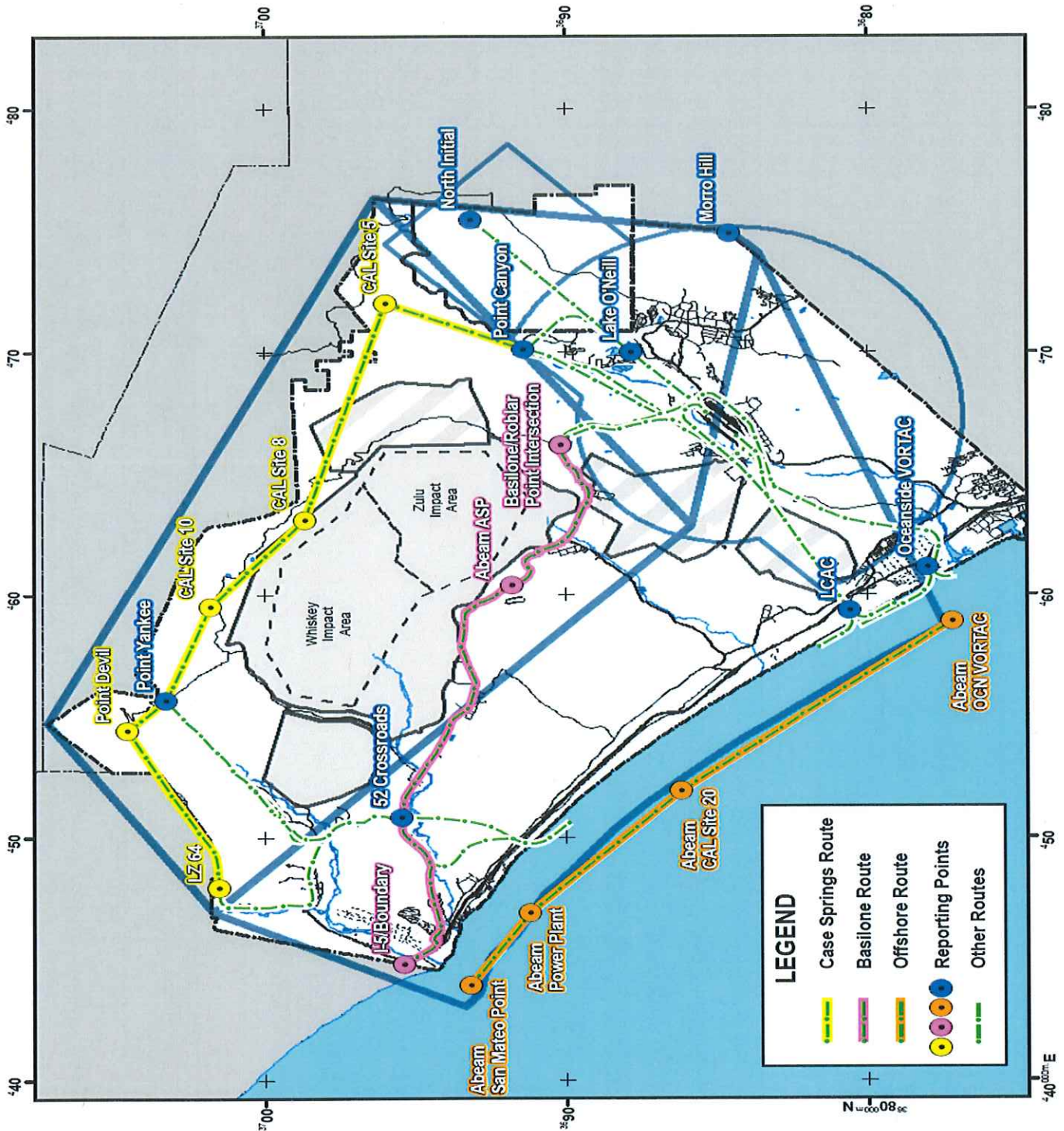


Figure 4-2



## 7. Altitudes

a. Helicopters/MV-22 in conversion mode- Aircraft operating outside established aerial gunnery ranges, Terrain Flight (TERF) routes/areas and aviation training facilities shall maintain a minimum altitude of 200' AGL. Helicopters/MV-22 in conversion mode are expected to transit at 500' AGL unless otherwise coordinated with LONGRIFLE.

b. Fixed Wing Aircraft/MV-22 airplane mode- a minimum of 1500' AGL unless otherwise coordinated with LONGRIFLE.

## 4006. AVIATION FACILITIES

1. Numerous aviation facilities to include: Administrative Landing Zones, Tactical Landing Zones (LZ), Confined Area Landing Sites, Drop Zones, simulated flight decks, Vertical Takeoff, and Landing Sites are located throughout the training areas. Appendix F lists the location of these aviation facilities. Additionally, a more detailed description of these facilities can be found in the MCB CampPen Aviation Range and Training Inventory and on the ROD SharePoint site.

2. Administrative LZ. Most cantonment and major command areas on MCB CampPen have a designated Administrative LZ for Medical Evacuation (MEDEVAC), Very Important Person, command, or routine administrative flights. The use of MCB CampPen Administrative LZs shall be coordinated with the Area Commander prior to submitting a scheduling request to the Range Scheduling Office. Administrative LZs are not intended for routine training events.

## 4007. GENERAL OPERATIONS

1. Prohibitions. Aircraft are prohibited from operating and/or landing within any impact area, range, firing line, artillery position, or mortar position when firing is in progress, or whenever troops or ammunition occupy the position.

2. DV Flights. Coordination should be made with Range Scheduling at least two working days in advance for aircraft transporting DVs.

3. MEDEVAC. MEDEVAC aircraft will receive priority. Aircraft engaged in an actual MEDEVAC mission shall immediately contact LONGRIFLE. LONGRIFLE will place all applicable ranges, artillery firing areas, or mortar positions in a check-fire status to allow the aircraft to proceed via the most direct route to the MEDEVAC scene. This suspension of operations will remain in effect until the MEDEVAC aircraft commander informs LONGRIFLE the MEDEVAC mission is completed, and the aircraft is clear of all ranges and impact areas.

## 4. External Operations

a. Unless in support of an emergency operation (e.g. firefighting), aircraft are prohibited from conducting external operations over non-participating personnel, cantonment areas, public surface roads, or across the I-5 Freeway.

b. For all Special Patrol Insertion/Extraction rigging operations, units shall submit an aviation overlay to Range Scheduling no later than (14) fourteen working days from the event.

5. Chaff and Flares. Chaff and flares may be expended at or below 500' AGL within an impact area, and within one nautical mile offshore of MCB CamPen. Chaff and flares shall NOT be expended without approval from LONGRIFLE. Aircraft shall make a range/sea sweep prior to the use of expendables to ensure the area is clear. Flares may NOT be expended during high wind conditions or when the FDR is EXTREME.

#### 4008. NIGHT VISION GOGGLE (NVG) OPERATIONS

1. General. Aircraft operating within MCB CamPen airspace on night vision devices shall follow the lighting configuration described below.

a. Single Aircraft Operations. Anti-collision lights shall be on; navigation lights shall be on at the highest intensity consistent with NVG compatibility.

b. Multiple Aircraft Operations. All aircraft in the flight shall have navigation, anti-collision, formation and blade tip lights on at intensity levels in keeping with safe flight. Aircraft in the flight, except the last aircraft, may turn off the anti-collision light if deemed in the best interests of safety by the pilot in command/flight leader. Separation between the lead aircraft and last aircraft in the flight shall not exceed one NM.

#### 4009. TACTICAL AIR CONTROL PARTY (TACP) OPERATIONS

1. General. TACP operations shall be under the positive control of a MCB CamPen qualified Joint Terminal Attack Controller (JTAC), TACP, Forward Air Controller (FAC) or a rotary-wing Forward Air Controller Airborne [FAC (A)]. For information on MCB CamPen FAC/JTAC safety training, go to the ROD SharePoint site.

##### 2. Scheduling and Coordination

a. TACP scheduling requests shall include type/number of aircraft, ordnance, impact area, IP, mark type, and supporting facilities (e.g., MP, AFA, etc.).

b. Standard TACP FAC brief sheets shall be submitted to the Range Scheduling Office no later than (NLT) 14 working days prior to the event. The standard FAC brief sheet for TACP operations are located on the Range Operations SharePoint.

c. Non-standard TACP FAC brief sheets shall be submitted to the Range Scheduling Office NLT 14 working days prior to the event. The brief shall include FAC brief sheet, RM, Concept of Operations, and an overlay.

3. TACP OIC/Range Safety Officer (RSO) Requirements. Units shall ensure required safety personnel are present during training IAW with following table.



4. Communication. Positive two-way communication must be established and maintained between the aircraft, the JTAC/TACP/FAC/FAC(A), and LONGRIFLE prior to conducting TACP operations. Operations will be suspended if air-ground communication is lost.

TACP OIC & RSO Requirements				
	Controls			
OIC/RSO FAC/JTAC/LRSO	Aircraft With No Ground Mark - No Laser	Aircraft With No Ground Mark - With Laser	Aircraft With Ground Mark - No Laser	Aircraft With Ground Mark - With Laser
FAC/JTAC	Yes	Yes	Yes	Yes
LSSO	No	Yes	No	Yes
OIC From Grd Unit	No	No	Yes	Yes
RSO From Grd Unit	No	No	Yes	Yes
FSC From Grd Unit	No	No	Yes	Yes

Table 4-1

5. Ordnance. TACP operations at MCB CamPen are conducted in accordance with the Special Instructions for the associated aviation range located on the Range Operations SharePoint. TACP operations are limited to rotary wing and fixed wing air to ground ordnance delivery. Fixed wing strafing is not authorized.

a. A number of ground ranges are located along the borders of the Whiskey and Zulu Impact Areas (as described in Appendix B). Units conducting TACP training should expect ground ranges along the borders of the impact areas to be occupied by non-participating personnel. Ordnance delivery should not occur until forward of all ground personnel and ranges.

b. All ordnance and their effects shall impact beyond the forward line of personnel and the forward limit of ranges along the borders of aviation impact areas.

c. Effects of ordnance include the resulting fragments, debris, and components of ordnance such as shell casings, links, expendables, chaff, and flares. (Please note "Restricted Fire Areas" within the aviation impact areas.) At no time shall any ordnance be released without positive target identification and marking.

d. Only Type 1 control may be conducted during live ordnance delivery.

6. Target Marking. All live ordnance delivery shall be marked by laser, mortar, artillery or rockets. Marking targets with direct fire weapons requires prior approval by the RCO. Marine Aircraft Group 39 aircraft may conduct "Talk-ons" during daylight only.

7. Clearing Hot. FACs/JTACs/FAC(A)s shall not call "cleared hot" until the FAC/JTAC/FAC(A) has the aircraft in sight, and the aircraft has cleared the



forward line of personnel and the forward limits of ranges along the borders of aviation impact areas.

8. Lasing. Lasing in support of TACP is conducted in accordance with the Special Instructions.

9. Weather Minimums. Pilots must maintain positive identification of the target and visual reference to the surrounding area for clearance of terrain and other hazards.

4010. SIMULATED CLOSE AIR SUPPORT (SIMCAS). SIMCAS operations are allowed in any training area within Camp Pendleton's restricted airspace. All SIMCAS must be supervised by a current FAC/JTAC/FAC(A). Units desiring to conduct SIMCAS shall submit a FAC Brief sheet and overlay of intended SIMCAS routings and areas to Range Scheduling NLT 14 working days prior to the planned event, unless utilizing a scheduled ACA.

4011. AVIATION ORDNANCE DELIVERY OPERATIONS. Helicopter and MV-22 Aircraft may schedule independent aviation ordnance delivery operations within the Zulu and Whiskey impact areas. Detailed instructions for aviation ordnance delivery operations are located under aviation special instructions located on the ROD SharePoint.

a. A number of ground ranges are located along the borders of the Whiskey and Zulu Impact Areas (as described in Appendix B). Units conducting aviation ordnance delivery training should expect ground ranges along the borders of the impact areas to be occupied by other personnel.

b. Ordnance delivery should not occur until forward of all ground personnel and ranges. All ordnance and their effects shall impact beyond the forward line of personnel and the forward limit of ranges along the borders of aviation impact areas.

c. Effects of ordnance include the resulting fragments, debris, and components of ordnance such as shell casings, links, expendables, chaff, and flares. (Please note Restricted Fire Areas within the aviation impact areas).

d. Non-standard aviation ordnance delivery operations shall be briefed to the RCO NLT 14 working days prior to the event (i.e. utilizing TERF routes or non-standard holding areas).

#### 4012. HELICOPTER TERRAIN FLIGHT (TERF) OPERATIONS

1. General. MCB CamPen airspace includes designated TERF routes/areas for helicopter low altitude navigation and pilot training proficiency. TERF operations outside established aviation ordnance delivery ranges and TERF routes/areas are not authorized. Helicopters conducting TERF operations along routes or in areas shall have a "high bird."

2. Scheduling. TERF routes/areas must be scheduled through the Range Scheduling Office prior to their use. Refer to paragraph 4004 of this Order when utilizing MIKE TERF route/area. Scheduling a TERF route does not authorize use of the TERF Maneuver Area. Maneuver Areas shall be scheduled separately from the TERF route.

3. TERF Routes. The following helicopter TERF routes are depicted on the MCIWEST-MCB CAMPEN Military Installation Map:

- Case Springs
- DeLuz Canyon
- Devils Canyon
- Mike
- Pulgas

4. TERF Maneuver Areas. The following helicopter TERF areas are depicted on the MCIWEST-MCB CAMPEN Military Installation Map:

- Case Springs
- DeLuz Canyon
- Mike
- Pulgas

#### 4013. HELICOPTER OUTLYING LANDING FIELD (HOLF) OPERATIONS

1. General. The MCB CamPen HOLF is located in San Mateo Canyon, in the vicinity of 11SMS 504 994. The HOLF provides one 3,000-foot grass runway (Rwy 22L/04R) and one 3,000-foot concrete runway (Rwy 22R/04L). The HOLF field elevation is approximately 350' MSL. The HOLF is uncontrolled and unlit.

2. Scheduling. 3rd Marine Aircraft Wing aircraft will have priority use. All requests will be made via RFMSS.

3. HOLF Transitions. The following HOLF transitions have been developed to facilitate transition from established transit routes. Aircraft shall enter the HOLF at 1,400' MSL. Aircraft shall depart the HOLF at or below 900' MSL.

a. Ocean HOLF Transition. Transit from the Offshore Route to a point on the shoreline one NM south of SONGS (vicinity of 11SMS 495 915), north to San Mateo Road (52 Area Crossroads), and inbound to the HOLF. Caution: Cross R-207A and R-300 at or above 1,000' AGL.

b. Basilone HOLF Transition. Transit along the Basilone Route to San Mateo Road (52 Area Crossroads) and inbound to the HOLF. Caution: Cross R-207A and R-300 at or above 1,000' AGL.

c. Case Springs HOLF Transition. Transit from the Case Springs Route to Point Yankee (vicinity of 11SMT 557 035) via San Mateo Canyon, and inbound to the HOLF.

NOTE: Unless otherwise instructed by LONGRIFLE, aircraft shall fly right side right-of-way while flying the HOLF transitions (i.e., left to left aircraft pass).

4. Communications Procedures. Aircraft shall employ the following communication procedures when operating at the HOLF.

a. Aircraft shall report the following points to LONGRIFLE for communication switch to HOLF common frequency of UHF 249.9.

(1) 52 Area Crossroads. The intersection of Basilone Road and San Mateo Road (vicinity of 11SMS 508 955).

(2) Point Yankee. Located at 11SMT 557 035.

b. HOLF pattern position calls will be made as required; however, a mandatory call shall be made on HOLF common under the conditions listed below.

(1) When entering from an entry point, report position and intentions.

(2) When departing the HOLF for an exit point, report intentions and direction of departure.

(3) When abeam for landing, report abeam and intended runway.

#### 5. Standard Operations

a. Aircraft shall operate at or below 1,400' MSL (1,000' AGL), unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude is 800' MSL when operating on Runway 22L/04R and 1,000' MSL when operating on Runway 22R/04L. Aircraft shall remain north of the San Mateo riverbed to remain clear of live-fire operations in the Quebec Impact Area when active.

b. Single runway operations. Aircraft may fly a left or right pattern. The first aircraft arriving in the pattern will establish pattern direction. No more than three aircraft may operate at the HOLF during single runway operations.

c. Parallel runway operations. When parallel runway operations are in progress, aircraft at Runway 22L or 04L shall fly a left pattern, and aircraft at Runway 22R or 04R shall fly a right pattern. No more than three aircraft may operate at each runway, for a maximum of six aircraft at the HOLF during parallel runway operations.

d. Runway change procedures. When prevailing conditions require a runway change, the following procedures apply:

(1) All aircraft will land on the runway or depart the HOLF operating area:

(2) All aircraft will report, "Ready for runway change."

(3) The aircraft closest to the new departure threshold will call for take-off on the new runway.

e. Procedures for Transitioning From One Parallel Runway to Another Parallel Runway. Aircraft wishing to transition from one parallel to the other runway may do so if they are the only aircraft in the pattern. Aircraft desiring to transition from one parallel runway to the other while other aircraft are operating at the HOLF shall depart the pattern and reenter via established reporting points (52 Area Crossroads/Point Yankee).



f. Concurrent use of HOLF by MV-22 in conversion mode and rotary wing aircraft is authorized.

g. Departure procedures. Aircraft departing the HOLF shall broadcast intentions and give way to pattern aircraft as they effect transition to the designated departure point (52 Area Crossroads/Point Yankee). Aircraft departing from Runway 04L at night for 52 Area will transit downwind, south of Camp San Mateo, and clear of the pattern before turning toward 52 Area Crossroads.

6. Night Operations. Patterns shall be flown as described above; however, no more than two aircraft may operate at the HOLF during single runway operations. No more than four aircraft may operate at the HOLF during parallel runway operations. NVG operations are authorized; however, simultaneous night aided and unaided operations are not authorized.

7. Concurrent HOLF and Helicopter Landing Zone (HLZ) Operations. When simultaneous operations are in progress at the HOLF and the HLZ, the following deconfliction procedures apply.

a. Runway 22 L/R. Aircraft flying a right pattern shall remain clear of, and give way to aircraft operating at the HLZ.

b. Runway 04R/L. Simultaneous Runway 04R/L and HLZ operations are not authorized.

c. HLZ. HLZ Aircraft shall monitor HOLF common (UHF 249.9) when HOLF operations are in progress. HOLF and HLZ position calls shall be made as required. Expect HLZ aircraft to fly a northwest pattern to remain within Base boundaries.

d. Night simultaneous HLZ/HOLF operations are not authorized.

#### 4014. PARACHUTE AIRDROP OPERATIONS

1. General. Parachute airdrop operations include dropping or releasing personnel, cargo, or vehicles from an aircraft for descent to the ground. Appendix F lists all standard DZs.

2. Scheduling and Briefing. Units desiring to conduct parachute airdrop operations shall schedule the airspace and the DZ required to support the operation PRIOR to attending the monthly aviation tasking conference. Failure to do so may result in disapproval of a DZ request. Additionally, on Zulu Air Priority days, parachute airdrop operations are subject to cancellation or modification. The requesting unit shall provide Range Scheduling a DZ Brief Sheet NLT seven working days prior to the jump. Units requesting to jump into non-standard drop zones shall submit a tactical DZ survey to the RCO NLT 14 working days prior to the event.

3. Restrictions. The following restrictions and safety precautions apply to all parachute and para-drop operations at MCB CamPen.

a. The RSO will suspend or cancel drop operations if, in their judgment, wind direction or wind gusts in combination with aircraft position make the drop unsafe.

b. 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; the winds through the jump altitude are unlimited.

c. Para-drops at MCB CamPen are restricted to the confines of the MCB CamPen SUA. Operations within R-2503D require scheduling 30 days prior to the event.

d. All High Altitude High/Low Opening Airdrops shall be conducted in VMC to include aircraft transit/pattern and jumper descent to DZ.

e. A cold pass is required prior to dropping cargo.

f. Units conducting cargo drops within drop zones impacting Major Surface Roads shall provide road guards to stop traffic during the drop. Road will not be closed for more than ten minutes.

4. Planning Considerations. The unit is responsible for the DZ survey. The DZ Safety Officer shall complete a safety survey of the DZ no less than 24 hours prior to conducting live parachute airdrop operations. The results of the DZ assessment shall be included in the RM prepared by the unit conducting the parachute training.

5. Procedures. The following control procedures will apply to all parachute airdrop operations conducted on this Base.

a. The RSO shall be physically located within the drop zone.

b. All aircraft entering MCB CamPen Restricted Airspace for participation in parachute airdrop operations shall check-in with LONGRIFLE. All aircraft conducting parachute or airdrop operations shall maintain constant radio contact with LONGRIFLE.

c. DZ Basilone is located within MCAS CamPen Class D Airspace. All aircraft conducting drop operations at this site may be directed by LONGRIFLE to contact the MCAS CamPen Air Traffic Control Tower. When the Class D Airspace is active, the MCAS CamPen Air Traffic Control Tower will provide clearance authority for the aircraft to begin drop operations.

#### 4015. AIRCRAFT REFUELING OPERATIONS

1. Sites. A list of approved aviation refueling sites is located in Appendix F.

#### 2. Constraints

a. Use existing access roads to all sites.

b. Use only the existing disturbed areas/hard-stand at each site. No brush cutting or disturbance outside of the existing footprint is allowed.

c. No digging/grading is allowed at any site without approval from Environmental Security.



- d. Secondary containment for refueling operations will be constructed using sand bags or some other implement over which impermeable material is draped and secured.
- e. No dirt piles or loose soil will be left at any site for any reason.
- f. All sites are to be left in their original condition after each refueling operation (no permanent tanks, containment berms, etc.).
- g. Units choosing to use the designated sites will not be required to seek approval from Environmental Security.
- h. Units shall obtain approval from Environmental Security when requesting refueling sites not listed in Appendix F.

#### 4016. UNMANNED AIRCRAFT SYSTEM (UAS) OPERATIONS

1. Airspace. UAS operations are only authorized when the MCIWEST-MCB CAMPEN SUA is activated; additionally, the UAS shall remain within the SUA. UAS operations within the MCAS Campen Class D or E surface areas must be approved by the Air Traffic Control Facility Officer. UAS operations must be coordinated with the Range Scheduling Office, and the required airspace must be scheduled in RFMSS.
2. UAS operations will be contained in subdivided blocks of airspace within the SUA in the form of Airspace Coordination Areas (ACA), Restricted Operating Zones (ROZ), or the airspace associated with established training areas to facilitate separation from other non-participating unit training.
  - a. Standard ACAs and ROZs have been established in multiple locations throughout the RTA complex to facilitate daily UAS operations; they are listed on the Range Operations SharePoint site.
  - b. Units may develop temporary, non-standard ACAs as required to facilitate UAS training objectives. Non-standard ACAs must be coordinated with Range Scheduling at least 14 working days prior to the event. Units must submit a UAS brief sheet to outline the concept of operations; sample brief sheets are available on the Range Operations SharePoint site. Non-standard ACAs must be accurately defined on the UAS brief sheet and depicted on an aviation overlay.
  - c. To support UAS (20lbs or less) operations, units may schedule the airspace associated with training areas. If approved, UAS operations must remain below 400 AGL within the boundary of the training area.
3. Hasty ROZs. To support flexible UAS (20lbs or less) integration in unit training, hasty ROZs may be requested real-time with LONGRIFLE to employ UAS on ranges, in training areas, on beaches, or around training facilities/ combat towns. Hasty ROZs are defined by a point (8 digit grid) with a 500m radius to an altitude of 400ft AGL, or as otherwise requested. The employment of hasty ROZs will be on a not to interfere basis with ongoing or previously scheduled non-participating training events. Hasty ROZs are restricted to UAS operations only.



4. Weather. UAS operations shall be conducted in VMC.

5. Communications. Positive two-way communication with LONGRILFE is required for UAS operations. The RSO for UAS operations is responsible for all required communications. The following communication requirements are mandatory for UAS operations:

a. Request activation of the airspace/ACA/ROZ. For hasty ACAs, provide an 8-digit grid.

b. Notification ten minutes prior to launch.

c. Request transitions between ACAs/ROZs.

d. Request changes to pre-planned altitudes.

e. Notification of loss of UAS navigation or communication ability (i.e., lost link).

f. Confirm safe landing/recovery.

g. Notification of airspace/ACA/ROZ de-activation.

h. In the event of a complete loss of control, provide last known location, direction of travel, speed, and estimated flight time remaining.

6. Safety

a. Unit commanders shall ensure all UAS meet Naval Air Systems Command flight clearance certification requirements for performance, air worthiness, and safety.

b. The RSO is responsible for the safe conduct of UAS operations as well as the following:

(1) Conduct a safety brief with unit personnel involved in UAS operations.

(2) Coordinate and input transponder/squawk code on UAS, if capable.

(3) Confirm input of preplanned lost link flight plan on the UAS. Lost link flight plans shall remain with the ACA/ROZ.

c. Personnel operating UAS must be qualified on the system, and supervised by a MCIWEST-MCB CAMPEN locally qualified RSO.

CHAPTER 5

WATERBORNE OPERATIONS

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## CHAPTER 5

### WATERBORNE OPERATIONS

5000. GENERAL. Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN) proximity to the Pacific Ocean provides a littoral training capability unlike any other Department of Defense Installation within the Continental United States. However, unlike the land-space that makes up the ranges and training areas located throughout the installation, the Marine Corps does not own the sea-space. Federal land and MCIWEST-MCB CAMPEN jurisdiction ends, and state waters begin, at the mean high tide line. Therefore, the ability of the Range Operations Division to de-conflict offshore activities is limited to previously schedule military or civilian units. It is not uncommon for unscheduled, non-participating civilian vessels to navigate within published offshore operating areas. Hence, all maritime activities conducted within State or Federal waters must be conducted in accordance with the United States Coast Guard (USCG) Navigation Rules and Regulations Handbook.

5001. MARITIME OPERATIONS AND SAFETY. In the case of all offshore activities, to include the Del Mar Boat Basin, the designated Range Safety Officer (RSO) is responsible for ensuring unit compliance with all communication requirements and personnel safety provisions identified in this order, as well as, the Marine Corps Warfighting Publications or technical manuals specific to the intended waterborne activity.

1. Communication. Units conducting operations within the Del Mar Boat Basin or the MCB CamPen Amphibious Vehicle Training Area (CPAVA) shall contact LONGRIFLE prior to going feet wet, feet dry, and in the event of a medical or operational emergency.

2. Safety Boat/Primary Rescue Vehicle and Medical Personnel. Upon check-in with LONGRIFLE, the RSO shall affirm the presence of a safety boat, or a Primary Rescue Vehicle has been identified within the formation, and appropriate medical personnel are on board with first aid equipment.

#### 5002. CAMP PENDLETON AMPHIBIOUS VEHICLE TRAINING AREA (CPAVA)

1. The CPAVA is an ocean area adjacent to the shoreline of MCIWEST-MCB CAMPEN used for amphibious operations and associated training. The CPAVA is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33° 19' 52.537"	117° 40' 03.513"
33° 22' 56.588"	117° 35' 20.333"
33° 12' 19.898"	117° 24' 09.943"
33° 09' 16.267"	117° 28' 52.943"

#### 2. Scheduling

a. MCIWEST-MCB CAMPEN Range Operations is responsible for scheduling and deconfliction of training in the CPAVA. Units desiring to conduct offshore training that results in crossing the shoreline of MCIWEST-MCB CAMPEN, must schedule the beach landing site and associated training areas/facilities through Range Operations in accordance with (IAW) Chapter 3 of this Order.



b. Units desiring to conduct hazardous activities off-shore are responsible for publication of a Notice to Mariners via coordination with the USCG.

c. Underwater demolitions must be scheduled 30 days in advance of operations.

5003. LANDING CRAFT AIR CUSHION (LCAC) TRANSIT LANE. Due to the LCACs high speed of advance, a clear LCAC Transit Lane extending 4,000 yards seaward from the Assault Craft Unit Five (ACU-5) ramp (33-15.5N/117-26.3W) has been designated for LCAC line-up purposes. This exclusion area (in effect, an LCAC "driveway") is the only safe access for LCACs departing from and returning to the ACU-5 ramp. Units should contact LONGRIFLE prior to crossing the LCAC Transit Lane along the beach. The LCAC Transit Lane is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33° 15' 44" N	117° 26' 30" W
33° 15' 17" N	117° 26' 8" W

5004. LANDING CRAFT AIR CUSHION (LCAC) OPERATIONS

1. LCACs are restricted in their ability to maneuver when departing from and returning to the ACU-5 ramp.

2. Anchoring. For LCAC safety purposes, it is imperative ships do not anchor within the LCAC Transit Lane.

5005. BEACHES. The Commanding General (CG), MCIWEST-MCB CAMPEN exercises command in all matters pertaining to the government-owned beaches and any restricted sea areas off the outer breakwater identified in reference (r).

Beach Name	Easting	Northing	Latitude	Longitude
State Beach A	11SMS 44538	11SMS 94342	33° 23' 13" N	117° 35' 47" W
Green Beach	11SMS 46173	11SMS 93612	33° 22' 50" N	117° 34' 43" W
State Beach B	11SMS 46935	11SMS 93226	33° 22' 37" N	117° 34' 14" W
SONGS	11SMS 47730	11SMS 92538	33° 22' 15" N	117° 33' 43" W
State Beach C	11SMS 48935	11SMS 91867	33° 21' 53" N	117° 32' 56" W
Gold Beach	11SMS 53065	11SMS 88119	33° 19' 52" N	117° 30' 16" W
Red Beach	11SMS 56318	11SMS 84071	33° 17' 41" N	117° 28' 9" W
White Beach	11SMS 56907	11SMS 83243	33° 17' 15" N	117° 27' 46" W
Blue Beach	11SMS 60785	11SMS 77555	33° 14' 10" N	117° 25' 15" W
Del Mar Rec (N)	11SMS 61682	11SMS 76270	33° 13' 29" N	117° 24' 40" W

Del Mar Rec (S)	11SMS 62301	11SMS 75170	33° 12' 53" N	117° 24' 16" W
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5006. DEL MAR BOAT BASIN

1. The CG MCIWEST-MCB CAMPEN exercises command in all matters pertaining to the Del Mar Boat Basin, the adjacent government owned beaches, channel, channel entrance, and the restricted sea areas off the Del Mar outer breakwater.

a. In accordance with reference (r), Del Mar Boat Basin is reserved exclusively for use by vessels owned and operated by the Federal Government. Permission for civilian vessels or craft to enter the area must be obtained from Range Control.

b. The Assistant Chief of Staff (AC/S), G-3/5, exercises general staff cognizance over the Del Mar Boat Basin Complex. The AC/S G-3/5 shall resolve "Priority Use" conflicts. All requests for use of the Del Mar Boat Basin will be addressed to the Range Scheduling Office.

c. The maximum speed of a craft operating within the Del Mar Basin and channel waters shall not exceed 5 mph or safe wake speed.

d. All units must gain and maintain positive communications with LONGRIFLE prior to and during any training, testing or transition event.

2. Scheduling. Units will utilize Range Facility Management Support System (RFMSS) to schedule.

a. Scheduled as separate facilities:

- (1) Quay Wall.
- (2) Landing Craft Unit (LCU) Sand Beach.
- (3) LCU Ammo Ramp.
- (4) Basin.

b. Maximum units to be scheduled:

- (1) 1 at Quay Wall.
- (2) 1 at LCU Sand Beach.
- (3) 1 at LCU Ammo Ramp.
- (4) 2 in Basin.

c. Transitions do not require scheduling. During transition to/from the Basin to/from open sea, units will call LONGRIFLE prior to launch/recovering in Basin. LONGRIFLE will provide advisories of Basin activity.

d. Surface swimming is prohibited in the area starting from the LCU Sand Beach/Quay Wall and continuing out into the channel (see Figure 5-1).



e. Recreational activities such as scuba diving, free diving, or snorkeling are prohibited.



Figure 5-1



5007. FISHING

1. No lobster traps, commercial or otherwise, will be set within the Del Mar Boat Basin or channel; nor within 750 feet of the jetty or groyne.
2. Commercial fishing boats will not be permitted within the Del Mar Boat Basin Area.
3. Fishing is permitted from the North Jetty, South of Del Mar Beach and authorized privately owned boats during daylight hours only, except when precluded by military commitments.
4. State of California fishing regulations apply to all users. Both a state fishing license and a Base fishing permit are required for fishing.
5. No spearfishing.
6. Violations of these restrictions will be reported to the MCB CamPen Game Warden at (760) 725-3360.

5008. RESTRICTED SEA AREAS

1. Navigational aids are off-limits, except to personnel authorized to service, inspect, and maintain them.
2. Restricted sea areas include all of the water of the Del Mar Boat Basin entrance channel lying northerly of a line between a light on the north Del Mar jetty at latitude 33 degrees 12' 20", longitude 117 degrees 24' 0", and a light on the north Oceanside Harbor groyne at latitude 33 degrees 12' 30", longitude 117 degrees 23' 0" (Del Mar Recreational Beach). Restricted sea areas are off-limits to all unauthorized personnel.

5009. PORT OF REFUGE

1. Use of the Del Mar Boat Basin and channel as a port of refuge by small craft is authorized.
2. A vessel in distress will be provided all necessary assistance, within the capability of the Base, to prevent loss of life or property.

5010. PRIVATELY-OWNED BOATS AND SMALL CRAFT. Authorized personnel operating a privately-owned boat within the Del Mar Boat Basin and channel waters will ensure boats or craft are properly outfitted and registered per applicable U.S. documentation regulations or state registration procedures, and reference (k).

5011. WATER TRAINING TANKS

1. The area commander is responsible for maintaining the proper life-saving and first aid equipment identified in reference (f) for military training and reference (r) for recreational swimming, at all water training tanks. Additionally, a primary and secondary means of communication capable of contacting Emergency Services (911) is required. The following is a minimum essential equipment list:

- a. Rescue Tube with Shepard's Crook.
  - b. Ring Buoy with Throw Line.
  - c. Stretcher.
  - d. Blankets.
  - e. First Aid Kit Approved by Local Medical Facility.
  - f. Drinking Water.
  - g. Aid Cot and Pillow.
  - h. Backboard and Splints.
2. For individual aquatic physical training (i.e. lap swimming) during published or coordinated hours of area water training tank availability, the Area Commander shall ensure an American Red Cross Certified Lifeguard, or a Marine Combat Instructor Water Survival (0918 Military Occupational Specialty (MOS)) is present.
3. In the case of unit level aquatic physical training during published or coordinated hours of Area water training tank availability, the unit level commander is responsible for ensuring one American Red Cross Certified Lifeguard, or a Marine Combat Instructor Water Survival (0918 MOS) is present for every 10 swimmers.
4. For Marine Corps Water Survival Training, to include the Modular Amphibious Egress Trainer and the Shallow Water Egress Trainer systems located in the 53 and 62 Areas, the unit level commander shall ensure all activities are conducted IAW Reference (f), and scheduled through TSD RFMSS firing desk.

CHAPTER 6

RANGE AND TRAINING AREA OPERATIONS

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CHAPTER 6

RANGE AND TRAINING AREA OPERATIONS

6000. GENERAL

1. Ranges and Training Areas are established by the Commanding General, Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN). When units are the primary users of a particular range, they do not inherit title to those ranges, and possess no authority to modify the nomenclature, purpose, or design of any range. Recommendations to improve ranges and facilities should be submitted to the Assistant Chief of Staff (AC/S), G-3/5.
2. Range Operation Division personnel are authorized access to ranges and training facilities for the purpose of inspection and investigation at all times. These personnel will not disrupt unit training unless necessary to perform their duties. Training units will not interfere with these personnel in the performance of their duties.

6001. RANGE AND TRAINING AREA ACCESS

1. Radio Communication

a. Establishing Communication. Units shall establish communication with LONGRIFLE before entering any range or training area. If communication cannot be established, personnel are not authorized to enter or occupy a range or training area.

b. The below frequencies are approved for use by MCIWEST-MCB CAMPEN, Range Operations:

40.35 FM	Primary Base Ground Safety Net
30.35 FM	Alternate Base Ground Safety Net
RC-1	Land Mobile Radio Talk Group
RC-2	Land Mobile Radio Talk Group

2. Communication Equipment

a. Training units shall provide their own communication equipment to support range safety requirements. LONGRIFLE will not issue communication equipment (e.g., hand-held radios).

b. All military units should use tactical radio gear to the maximum extent possible.

c. Military units without tactical radio gear, and civilian organizations, may use the Land Mobile Radio System using commercial, off the shelf radios.

d. Any additional means of communications (i.e., cell phones) must be approved by the Range Control Officer (RCO).

3. Check-in. The Range Safety Officer (RSO) must check-in with LONGRIFLE via radio on published LONGRIFLE frequencies. The RSO shall provide their name, range identification number, confirm numbers of participating personnel, types of weapons, ammunition to be utilized, and verify a safety vehicle and appropriate medical personnel are present.

a. A radio check with LONGRIFLE shall be made every hour at the top of the hour for units conducting training in training areas, on beaches, or on facilities.

b. A radio check with LONGRIFLE shall be made every hour at the bottom of the hour for units conducting training on ranges.

c. If communication with LONGRIFLE is interrupted, the unit will immediately cease training and remain in an inactive or "check-fire" status until positive communication has been reestablished.

#### 4. Call Signs

a. Units on ranges shall identify themselves by range number, rather than unit call sign.

b. Units in training areas shall identify themselves by unit and training area.

c. Unit nick-names (i.e., Thunder, Highlander, etc.) are not authorized on range control ground nets.

5. Administrative Traffic. Unit administrative traffic shall not be transmitted over the Base Range Safety Nets. Units should use organic communication nets to accomplish administrative matters.

#### 6002. RANGE ACCESS CONTROL FEATURES

1. Range Cans. Range cans are attached to a pole at each range, rappel tower, mortar position, and artillery firing area. In the ammunition can, the RSO will find a red flag and the most current copy of the Special Instructions for the range/facility. If any items are missing, the RSO should contact LONGRIFLE for replacement.

2. Warning Flags and Warning Lights. During daylight hours, the warning flag shall be raised whenever a range is in a hot status. During hours of darkness, a blinking red light, facing to the rear of the range, shall be in place. LONGRIFLE will place the unit in check-fire until flags or lights are in place. The flag is in an ammo can, along with the specific Special Instructions, attached to a pole at each training facility. When aviation units are conducting night live fire operations in the Zulu or Whiskey Impact Areas, units on ranges adjacent to the Zulu and Whiskey Impact Areas shall mark their forward position with an Infrared (IR) Strobe, IR chem-light, or a visible light source.

3. Barricades and Range Guards. Either barricades or range guards shall block normal approaches to danger areas created by firing. The RCO shall determine specific requirements.



a. Barricades. When required, barricades shall be emplaced on all roads and trails leading into range areas.

(1) Firing units shall ensure barricades with clearly visible signage area in place prior to firing. Specific requirements for each range are listed in the Special Instructions (SPINS) located on each Range.

(2) During hours of darkness or limited visibility, units are responsible for barricade lighting with chem-lights or other suitable means.

(3) In order to establish barricades on a facility other than live fire ranges, units shall submit an overlay depicting location and type of barricade to the RCO No Later Than (NLT) 14 working days prior to the event. This type of barricade shall be surface laid only and manned at all times.

b. Range Guards

(1) Range guards shall be posted in pairs with positive communications with the RSO to prevent entry into danger areas that cannot be observed, or which do not lie within the established impact areas. Normally, range access roads are not within this category and do not require a range guard, except as listed in the Special Instructions on the range or as specified by the RCO.

(2) Artillery firing units shall post range guards on established roads when the area "E" of the surface danger zones (SDZ) diagram (refer to directives in the Marine Corps Order 3570 series) covers the road involved. Traffic on these roads shall be halted during actual firing. Delays must not exceed 10 minutes at any time.

(3) Officer in Charge/RSOs may post additional range guards, as necessary, to enhance safety. The arbitrary blocking of roads or the denial of access to other than a danger area is not permitted.

(4) Range guards shall be provided with a means of positive communication issued by the unit. Range guards shall also be provided with some means of illumination for the identification of their positions during hours of darkness.

6003. TRAINING AREA ROADS

1. General

a. Range Control provides a Road and River Report outlining conditions of major roads and rivers. Units should refer to the report prior to training operations to assess road traffic ability, especially during times of inclement weather.

b. The speed limit on all training roads throughout Marine Corps Base, Camp Pendleton (MCB CampPen) is 25 Miles Per Hour (MPH) unless otherwise posted, or conditions dictate a lower speed to ensure safe transit.

c. Units should conduct route recons during the planning phase of training to ensure conditions of the roads will safely accommodate the movement of unit vehicles to and from scheduled training sites, and to



establish appropriate controlling/safety measures as needed. Route recons do not need to be scheduled but must be conducted utilizing government vehicles or authorized privately owned vehicles (trucks only). Continuous communication must be maintained with LONGRIFLE throughout the transit. Route recons that are not scheduled may be impeded by training units.

d. All foot and vehicle traffic must remain clear of fire breaks.

e. Privately Owned Vehicles and non-tactical vehicles shall give right of way to tactical vehicles and foot traffic.

## 2. Roblar Road

a. Safe transit of Roblar Road requires a thorough RM, and compliance with all road sign instructions and speed limits.

### b. Hiking on Roblar Road

(1) Units should follow all scheduling, communication, and safety procedures required for all other hikes; but when on the paved portion of Roblar Road, the rules listed below shall apply.

#### (2) Daylight

(a) The unit shall have at least one lead and one trail vehicle. The uphill vehicle must be at least 100 meters from the nearest Marine on foot and the downhill vehicle must be at least 50 meters. These vehicles will stop ALL traffic before traffic reaches the column.

(b) In addition to communication with LONGRIFLE, communications must be established and maintained between both road guard vehicles and the column.

(c) Vehicle traffic movement through the column will be allowed only after communication and coordination is made between the vehicle driver and the Officer in Charge (OIC) or staff noncommissioned officer in charge (SNCOIC) of the unit on foot.

(d) Vehicles will not be allowed to pass troops that are moving.

#### (3) After sunset

(a) There will be no tactical night movements on Roblar Road.

(b) All vehicles will use headlights.

(c) Flashlights will be on and spaced throughout the column (at least one every 10th person).

(d) Lead and trail personnel will each have BOTH a flashlight and a reflective vest.

3. Old El Camino Real. Old El Camino Real is the asphalt paved road east of I-5 running from San Onofre Nuclear Generating Station to the vicinity of Pulgas Gate. This road is a training facility and must be scheduled in Range

Facility Management Support System (RFMSS). Use of the road for convoy operations is limited to one unit.

4. Old Highway 101. Old Highway 101 is the asphalt paved road paralleling I-5 running from State Beach to the vicinity of Pulgas Gate. Vertical and/or short take-off and landing (V/STOL) 101 is the concrete portion of Old Highway 101. This road is a training facility and must be scheduled in RFMSS NLT 60 days from the event. Use of the facility is limited to one unit.

6004. IMPACT AREA ACCESS

1. Access into impact areas is prohibited unless approved by the RCO. The process for impact area access is discussed in Appendix B of this Order.

2. Detailed descriptions of the High Hazard Impact Areas and Non-dudged Impact Areas are listed in Appendix B of this Order.

6005. LIVE FIRE OPERATIONS

1. Live fire shall not be conducted unless it has been scheduled with the Range Scheduling Office, and authorized by LONGRIFLE following check-in.

2. Live fire operations require a designated OIC. The OIC shall provide their name and range identification number to LONGRIFLE. Once all regulations and safety requirements have been satisfied, LONGRIFLE will authorize the unit to go hot or into a training status.

3. Helmets and flak jackets [Personal Protective Equipment level 1] shall be worn for any live fire event involving movement or maneuver, high explosives, grenades, machine gun, or CQB in shoot houses. For all other training, unit RM/SOP will determine helmet and flak jacket requirements.

4. The OIC and RSO shall be physically present at the range or firing position whenever training is in progress. If it becomes necessary to change RSOs, both old and new RSOs must be physically present at the range or firing position to conduct a face-to-face relief. Prior to requesting a change over, the new OIC will conduct a joint inventory of all ammunition with the old OIC. The new RSO/OIC will verify all safety/weapons data.

5. Targets

a. The Training Support Division (TSD) provides automated targets systems with operators for live fire training; TSD help desk (760) 725-4444.

b. Targets provided by the unit shall be placed and engaged IAW the published SPINS for the range. Units shall observe all safety precautions and regulations. Automated targets will never be placed in a dud-producing impact area.

c. Targets utilized during live fire and movement events shall be "knock down stay down" type targets.

d. Targets used for Enhanced Marksmanship Program (EMP)/CQB static "Square Bay" type training shall be mounted on soft wood uprights and shall be made from cardboard or paper. Pallets used for EMP or Battle Sight Zero



shall not be engaged closer than seven meters. Engineer stakes utilized to support pallets shall be placed on the outside edges of the pallet.

6. Securing from Training

a. The RSO is not released from his/her responsibilities until cleared by a Range Safety Specialist, Range Inspector or the Range Landlord. RSOs will be present with the appropriate personnel at the time of the inspection to conduct additional police calls if required.

b. For ranges inspected the morning following night firing, the RSO shall coordinate an inspection time with LONGRIFLE. The RSO shall provide a point of contact and phone number.

6006. TRAINING AREA OPERATIONS

1. Assignment to a training area does not include a range, Artillery Firing Areas (AFA), Mortar Firing Areas (MFA), Observation Posts (OPs), CALSITE, Landing Zone, Danger Zones, airspace, or other training facility (including combat towns) located within that area unless specifically requested and approved by the Range Scheduling Office. Therefore, personnel are not authorized access to these areas.

2. Training shall be conducted and supervised in a manner that avoids damage to facilities and utilities located within the training areas. Units training in the vicinity of any aviation training facility shall ensure sites are not disturbed, no obstruction is left in the area, and no foxholes or other entrenchments are constructed at these locations. Unless otherwise scheduled by the RSO and approved by LONGRIFLE, units training in the vicinity of any aviation facility shall remain clear by not less than 500 meters.

3. Housing Areas. Units using the Bravo Three, Hotel, India, Juliet, and Oscar One Training Areas will remain clear of Base housing areas. Entry into the Juliet Training Area will not be made via any 17 Area housing access roads.

4. Fighting Holes. All fighting holes shall be filled in upon the completion of each training exercise.

5. Exclusive Use. Training areas are not exclusive use areas unless special coordination with Range Scheduling has been accomplished. Exclusive use consideration will be based upon the type and size of the requested activity.

6. Training Near the Ammunition Supply Point (ASP). The ASP is located in the Papa Three Training Area. Activity in this area is restricted due to an explosive arc that extends 500 meters out from the perimeter fence. Although troops may be permitted in this area, the use of pyrotechnics of any type is prohibited.

7. Communication Wire. Units may lay wire for temporary intra-unit communication (field telephones) as long as the wire does not interfere with other operations or units in the same area. Any wire strung across ravines, between poles or trees, or at an altitude higher than 15 feet above ground level shall be clearly marked with white engineer tape or other highly



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visible materials. All communication wire must be retrieved prior to departure. Temporary or semipermanent field wire lines shall not be installed on Base telephone or electrical poles.

8. I-5 Freeway and Railroad Tracks. The I-5 Freeway, the rights of way immediately adjacent to the I-5 Freeway, and the North County Transit District rail-road tracks are off-limits to pedestrians, troop training, and vehicular traffic. Underpasses and overpasses will be used when crossing railroad tracks or the I-5 Freeway. If it is necessary to cross the railroad tracks at ground level, the unit shall make prior arrangements to have a certified flagman at the railroad tracks by contacting the MCB CamPen Transportation Management Office (TMO) at (760) 725-8164. Units shall inform the RSO when all coordination has been made. Any fees incurred are the responsibility of the training unit. TMO's notification requirement is 48 hours.

9. Road Crossings. Personnel formations and troop movements, of any type, on hard surface roads are prohibited.

6007. BIVOUACKING. Bivouacking is allowed on ranges, training areas, training beaches, OPs, MFAs and AFAs subject to the following conditions:

1. A RSO and designated medical personnel shall remain on sight.
2. Ranges shall not be scheduled for the purpose of bivouacking only. If scheduled for the following day, units may arrive the night before firing to occupy the range.
3. Units may bivouac after firing, provided clearance of the range or AFA/MFA is conducted before the arrival of the next scheduled using unit.
4. Bivouacking shall take place only behind the firing line or start point, of the range.
5. Bivouacking in training areas shall not impede training at specific facilities unless those facilities have also been scheduled to support the bivouac.
6. Bivouac sites shall remain a minimum of 500 meters clear of all aviation facilities.
7. Bivouac sites in locations within training areas or beaches shall be marked at night.
8. An eight digit grid coordinate shall be provided to LONGRIFLE when bivouacking in training areas or on beaches.
9. The safety net shall be monitored at all times during bivouac status.

6008. POLICE OF RANGES AND TRAINING AREAS

1. Police of ranges and training areas is the responsibility of the using unit. The OIC and/or RSO will ensure ranges, training facilities, and training areas used by their units have been properly policed. All solid waste brought to ranges, training facilities, and training areas - including

cardboard, wrapping materials, food waste, communication wire, expended brass, and ammunition containers - shall be removed and disposed of in approved containers or established landfills. Trash will not be buried. The practice of stockpiling refuse for removal later is not permitted. An inspection by Range Control may be required prior to departure.

2. Units training in Combat Towns or Forward Operating Bases equipped with atmospherics (e.g. faux gates, jersey barriers, furniture, or other items) shall return all items to their original locations and set up. Any items that are broken shall be reported to the G-3/5 Range & Training Area Management Division, (760) 725-4254."

3. Dumpsters. Placement and use of dumpsters at ranges or in training areas must be approved by the RCO. Disposal of by-products of munitions (i.e. brass, etc.) is not authorized. Dumpsters must be either locked or guarded at all times.

#### 6009. FIELD HEADS

1. Chemical Heads. Platoon size or larger units, and stationary units, must use chemical heads. Chemical heads may be coordinated through Base Property (760) 725-4711/4209. Users shall ensure chemical heads are clear of surface danger zones and aviation facilities. Any organization assigned to a range and/or training area shall properly police heads in their assigned area. Trash will not be disposed of in chemical heads. Before using urinals and/or chemical heads, personnel should check for poisonous insects and other hazards.

2. Cat Holes. Squad size or smaller units maneuvering alone may use cat holes to dispose of solid human waste. Cat holes shall not be dug in or adjacent to watercourses.

6010. LARGE SCALE EXERCISES. The procedures listed below will be in effect during battalion size (or larger) exercises (e.g. MCCRE, artillery FIREXs, combined arms exercises, amphibious operations involving air and/or live-fire etc.), where a tactical control agency Fire Direction Center (FDC)/Fire Support Coordination Center/Direct Air Support Center or consolidated operations center has been established.

1. Subordinate units shall contact LONGRIFLE for emergency notifications (e.g., MEDEVACS, wildland fires, etc.). Subordinate units shall monitor LONGRIFLE communications at all times.

2. The tactical control agency/consolidated operations center shall keep LONGRIFLE advised of all subordinate unit locations and status throughout the exercise.

3. After LONGRIFLE provides the initial approval to commence live-fire, the tactical control agency/consolidated operations center shall keep LONGRIFLE informed, at all times, as to which ranges, artillery positions, and mortar positions are actually conducting live-fire operations.

4. The tactical control agency/consolidated operations center shall keep LONGRIFLE advised of all air operations taking place.



6011. INFANTRY WEAPONS

1. All weapons will be operated in strict accordance with appropriate field manuals, weapons Technical Manual (TM), MCWP's, directives in the Marine Corps Order (MCO) 3570 series, and special instructions for specific ranges.
2. Overhead fire will only be authorized by the RCO, and as prescribed by directives in the MCO 3570 series, appropriate firing tables and field manuals.
3. Location and training capability of specific live fire ranges are located in Appendix C.

6012. MINES, BOOBY TRAPS, AND PYROTECHNICS

1. The use of live mines and live booby traps will be confined to demonstrations of their effectiveness. Demonstrations shall be conducted in an impact area, or on an approved demolition range IAW special instructions.
  - a. Demonstrations in impact areas shall be approved by the RCO and coordinated with Explosive Ordnance Disposal. Live mines shall not be placed under or near any metal object which could become a missile hazard (e.g., jeeps, 55-gallon drums, etc.).
  - b. Practice mines and booby traps may be used in training areas and on demolition ranges. Use shall be governed by the Fire Danger Rating (FDR).
  - c. Practice mines or booby traps or explosive devices shall not be left on ranges or maneuver areas. Trip flares shall be counted before issue to ensure all items issued have been retrieved on completion of the demonstration or exercise.
2. Pyrotechnics. Pyrotechnics may be used in all impact areas, training areas, and field firing ranges provided the FDR does not prohibit their use. Units shall request permission from LONGRIFLE prior to using pyrotechnic device.
  - a. Pyrotechnics shall be stored in small amounts, away from any firing points, either right or left of, but not directly behind the firing point. They shall be placed to minimize the possibility of ignition or explosion in case of an accident during firing.
  - b. Use extreme care when handling pyrotechnics so they do not fall onto shooters or other personnel, into boxes of pyrotechnics, or other ammunition.
  - c. Trip flares shall be fenced or guarded to prevent personnel from approaching within five feet of each installed flare.
  - d. Trip flares shall be positioned so the hazard pattern or the impacting flare does not endanger personnel.
  - e. Trip flares shall not be left on any range or training area. Trip flares shall be counted before issue to ensure all items issued are retrieved on completion of the demonstration or exercise.



f. 40MM illum, star clusters and smoke may be used in all impact areas, training areas and field firing ranges provided the FDR does not prohibit their use. Units shall request permission from LONGRIFLE prior to using any shoulder fired 40mm DODICs.

g. While conducting rehearsals and live fire with flash bangs, the RSO shall ensure:

- (1) Flash bangs shall be carried in pouches.
- (2) Flash bangs will only be used inside urban structures.
- (3) Flash bangs shall not be thrown near standing water or mud.
- (4) Only one flash bang shall be thrown at a time.
- (5) The maximum number of flash bangs to be thrown by an individual thrower is two with single hearing protection and 41 with double hearing protection, within a 24 hour period.
- (6) No one shall be closer than five meters of detonation.
- (7) Human target participation is not authorized.
- (8) Once a pin is pulled on a flash bang, it shall not be reinserted into the flash bang.

#### 6013. DEMOLITIONS

1. Safety precautions shall be strictly adhered to as prescribed in appropriate field and training manuals, MCO 3570 series, and this Order.
2. Demolitions training with net explosive weight (NEW) greater than 1/4 pound TNT equivalent are restricted to established demolition ranges in accordance with the Special Instructions. Use of demolitions larger than 1/4 pound NEW (or equivalent) in training areas must be approved by the RCO.
3. Explosives equivalent to 1/4 pound TNT (1/4 pound blocks of TNT and C4 equivalent) NEW may be used on all ranges and training areas. Units shall submit a demolition plan or breaching report NLT seven days from the event when using 1/4 pound demolitions within the training areas
4. Be aware of critical Base utility points that may be located throughout training areas and could be subject to damage. Contact AC/S G-F, (760) 725-4820/4743 for more information to coordinate.

#### 6014. NON-LETHAL/LESS THAN LETHAL WEAPONS

1. The terms, "non-lethal" or "less than lethal" should be understood as a function of intent. It is a goal, not a guarantee for these weapons. The RCO must approve the concept of employment of any non-lethal weapons not previously addressed in this Order.
2. The use of Special Effects Small Arms Marking System shall be conducted in accordance with reference (a).

6015. SHOOTHOUSES

1. OIC and RSO will ensure shooter qualifications are completed.

2. Shooter Qualifications

a. All personnel conducting live fire must have completed the required live fire qualification prior to shooting on this range.

b. "Current" qualifications must meet the following criteria:

(1) Qualification must be completed within 48 hours prior to conducting training.

(2) Qualification must include both static and moving courses of fire.

(3) If not completed same day, qualification shall be indicated as completed on unit RM.

6016. ARTILLERY AND MORTARS

1. Procedures for Firing Artillery

a. The AFAs, indicated in Appendix D, are authorized for use by units conducting indirect-fire aboard MCB CamPen. When firing over training areas, roadways, maneuver units or occupied positions, ammunition cleared for overhead-fire is required.

b. Preparation. All AFAs require reconnaissance by survey prior to occupation and live-firing. Each AFA is marked by a sign to denote the AFA number and a hearing hazard zone.

c. SDZ Diagram Construction and Safety Cards. All active SDZs and data cards are on file with the RCO. Any modifications or additions shall be submitted no less than 14 days prior to the event.

d. Target Area. The target area, as depicted in the SDZ diagram, will be communicated to LONGRIFLE prior to the unit going into a hot status.

e. Non-Designated AFAs. Use of an AFA not designated in this Order shall be made by a special request, accompanied by a SDZ diagram. Forward requests to the RCO 30 days prior to the proposed firing date.

f. Special Use Airspace. Dimensions and operational characteristics of SUA required to support artillery live-fire are discussed in detail in Chapter 4.

g. Direct Observation. The impact of all rounds fired shall be under direct observation by personnel or radar. The OIC shall ensure qualified observers are present. The OIC shall record and call in the location of all duds as they occur.

h. Direct Fire Procedures

(1) Direct-Fire Shoots. Direct-fire shoots shall be conducted per current unit safety SOPs, appropriate Weapons TM and FMs.

(2) Direct-Fire Ranges. Ranges 407 and 408A are designated for direct-fire.

i. HIMARS and Improved Conventional Munitions firing will be conducted in accordance with the established SDZs and Data Cards.

j. FASCAM. The firing of scatterable mine munitions is prohibited.

## 2. Procedures for Firing Mortars

a. The following procedures shall be used when firing infantry mortars aboard MCIWEST-MCB CAMPEN. MFAs and mortar positions must be scheduled 14 days prior to training evolution. The RCO shall catalog the authorized data cards and SDZs for MFAs and mortar positions. Information regarding the conduct of firing is contained in the ammo can attached to a pole at each MFA/mortar position. The location of MFAs and mortar positions are listed in Appendix D.

b. Target Area. The target area, as depicted in the SDZ diagram, and the maximum ordnance of the ammunition to be fired, will be communicated to LONGRIFLE prior to the unit requesting a hot status.

c. Restrictions. Firing infantry mortars over the heads of unprotected troops is prohibited.

d. Direct Observation. The impact of all rounds fired shall be under direct observation by personnel. The RSO shall ensure qualified observers are present. The RSO shall record and call in the location of all duds as they occur.

3. Calculated Safety Information. The RSO shall verify to the OIC of the firing unit lay of gun line, FDC fire control (plotting boards and/or MBC), and each gun "SAFETY T" for each charge to be fired in that position. After the FDC calculates the firing data from the call for fire requests, the RSO shall check it against the appropriate "SAFETY T," to ensure the data placed on the weapons system is safe.

## 4. Increment Burning

a. The OIC or RSO must be present and co-located with increment burning.

b. Increment burning may be conducted in all AFAs, MFAs, and mortar positions during FDR of LOW, MODERATE, and HIGH. In order to reduce the potential for costly wildland fires when the FDR is VERY HIGH or EXTREME, burn areas will be identified by the RCO. During all increment burning activities, the area shall be cleared to mineral earth, no closer than 200 feet to vegetation. Increments shall be burned in single or double rows, not to exceed 12 inches in width, and not to exceed a total of 100 increments.

c. Units shall have fire extinguishers, water, and shovels at the burn site. Units shall contact LONGRIFLE for permission prior to burning. Units



shall remain at the burn site for 30 minutes after the last burn, ensuring no fires have been started in the surrounding vegetation.

6017. TANKS/AMPHIBIOUS ASSAULT VEHICLES (AAV)/LIGHT ARMORED VEHICLES (LAV)

1. Firing over the heads of personnel from moving vehicles is prohibited.
2. Individual vehicles shall display a red range flag while firing. While on the firing line, each vehicle shall display a green range flag when all weapons have been cleared. A yellow flag shall be displayed when there is a weapon malfunction.
  - a. The relationship between firing points and targets must meet the requirements listed in the MCO 3570 series.
  - b. Firing points will be physically marked on the ground when moving to those positions to fire; ground marks are not required for static fire.
  - c. Live rounds shall not be chambered until the firing vehicle has reached the specified point on the range designated as a firing area. LAV in an uploaded status shall have systems in both manual and electric-safe.
  - d. No weapons system shall be elevated above the line of sight to target, unless that weapons system has been determined to be clear of ammunition, or is required to be elevated above that line in order to be safely cleared.
  - e. The clearing of any weapon shall be accomplished per the appropriate operator's manual.
  - f. Prior to movement of any vehicle from designated firing areas, the RSO shall ensure all weapons systems are clear.

6018. VEHICLE CROSSINGS

1. Notify LONGRIFLE when crossing main surface roads. commanding officers, officer in charge (OIC), or Staff Noncommissioned Officer in charge (SNCOIC) of vehicles crossing hard-surfaced roads shall ensure crossings are properly policed immediately after use. Proper police includes removing soil, rocks, debris, and dunnage from the paved surface of the road, leveling the shoulders of the road, and cleaning drainage ditches paralleling shoulders of the road. When it is necessary for tracked vehicles to cross wheeled vehicle access roads in training areas, crossings shall be made at right angles to the road, at low speed, without turns. If it is necessary for tracked vehicles to operate on these roads, the approach shall be made at the minimum angle possible to avoid sharp turns on the road surface. Speeds shall not exceed five miles per hour. Do not hold up traffic for more than 10 minutes.
2. Road Guards. Road guards shall be posted a safe distance on either side of crossings to stop traffic while vehicles are crossing, and when police is conducted. Road guards shall wear high-visibility safety vests for all crossings, day and night. For all crossings made during periods of darkness or limited visibility, road guards shall carry operating flashlights, turned on, with plastic signal wands.

3. Road Use. Tracked vehicles are prohibited from using asphalt and macadam roads, and operating on the shoulders of all roads. Old El Camino Real (11SMS 569 852 to 11SMS 489 925) and Roblar Road may be used, observing speed restrictions, minimum angle turns on road surfaces, and conditions of entrance and exit. Permission to use paved roads under unusual or emergency conditions shall be requested from LONGRIFLE.

6019. EXPERIMENTAL WEAPONS AND ORDNANCE. Experimental weapons or ordnance shall not be fired on ranges, MFAs or AFAs at MCB CamPen without prior approval from the RCO.

6020. FORCE ON FORCE TRAINING. Force on force training will not be conducted with the same weapons system within a 24 hour period from the end of a live fire event without AC/S, G-3/5 approval.

1. The OIC and RSO for force on force will take the following steps prior to any force on force training:

a. Conduct a "shake down" of every participant prior to conducting the force on force event.

b. Inspect all weapons to ensure they are in Condition Four.

c. Inspect all magazines to ensure they are empty.

2. If any live ammunition is discovered during training, OIC will cease all activities, recover all ammunition, and reinitiate shakedown procedures.

3. If additional personnel arrive after training has commenced, a "shake-down" must be conducted.

CHAPTER 7

AMMUNITION AND EXPLOSIVES

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CHAPTER 7

AMMUNITION AND EXPLOSIVES

7000. TRANSPORTATION OF AMMUNITION AND EXPLOSIVES

1. General. References (b), (g) and (m) govern policies and procedures associated with the use, storage, and accountability of ammunition and explosives.

2. Qualified Drivers. Drivers of any vehicle transporting ammunition or explosives aboard Marine Corps Installations West-Marine Corps Base, Camp Pendleton (MCIWEST-MCB CAMPEN) shall meet specific administrative and medical criteria. Drivers shall also complete the Explosives Driver Course. Point of contact is Base Safety at (760) 763-4817.

3. Privately Owned Vehicles (POV). Using POVs aboard MCIWEST-MCB CAMPEN to load, store, or transport ammunition, pyrotechnics, or explosives of any kind for military training is prohibited. Authorized users of ranges dedicated to recreational firing, and individuals authorized to hunt aboard MCB Camp Pendleton, are permitted to transport a reasonable amount of small arms ammunition when enroute to and from those activities.

7001. AMMUNITION HANDLING AND STORAGE

1. Ammunition Handling Facilities. The Explosive Safety Officer [(760) 763-4817] maintains a list of sited ammunition handling/ transfer facilities, and must formally authorize requests for facility operations via a Request for Movement of Ammunitions and Explosives. The facilities must be scheduled and supervised by a qualified Range Safety Officer (RSO) in communication with LONGRIFLE. All operations are subject to reference (m) and directives in the Marine Corps Order 3570 series.

2. Firing Sites

a. Ammunition at firing sites shall be positioned to minimize the possibility of accidental ignition, explosion, or detonation. Ammunition shall be staged in a dry place, and protected from inclement weather and the direct rays of the sun.

b. Flame producing devices or other spark producing items must remain 25 feet from any explosive materials.

c. Precautions shall be taken to prevent ammunition from contacting the ground or spark producing substances (for example, placing the ammo on the pallets provided upon delivery will prevent the ammunition from ground contact).

d. Ammunition may be pre-positioned at firing sites if approved by the Range Control Officer and in compliance with the provisions of references (b) and (m).

3. Ammunition Control. The following ammunition control procedures shall be observed.

a. Supervisory personnel shall be present with the vehicle/convoy designated to pick up or return ammunition from or to the Ammunition Supply Point (ASP).

b. All ammunition shall be delivered to the Officer in Charge (OIC) of the range/firing site. The OIC shall conduct a joint physical/visual inventory of the ammunition received with the designated personnel delivering the ammunition. The OIC shall compare this against what is reflected on the Standard Supply Form DD Form 1348-1A which can be found at <https://navalforms.documentservices.dla.mil/web/public/home>. The OIC shall verify the lot number on every container of ammunition to ensure it matches the lot number on the Standard Supply Form. The OIC shall open all containers which are not factory-sealed, and physically/visually inspect the ammunition to ensure it corresponds with the ammunition type on the issue document.

c. The OIC shall sign for the ammunition using the Standard Supply Form which can be found at <https://navalforms.documentservices.dla.mil/web/public/home>. Using NAVMC 11381 (Expenditure Report), the OIC will enter the quantity received by DODIC, document number, and lot number. A copy of the Expenditure Report shall remain on the range with the OIC at all times.

d. The OIC is ultimately responsible for the accountability of ammunition and shall supervise the issue and control of the ammunition for the duration of the exercise. The OIC shall ensure ammunition is not removed from the original packing until just prior to firing. Ammunition not containing a factory seal shall be expended first.

e. The OIC shall take measures to prevent ammunition from being rendered unserviceable, in the event the exercise is terminated prematurely, by not removing excessive quantities of ammunition from its original packaging, losing lot number identity, burning, or otherwise destroying containers, or exposing items to the weather, etc.

f. The OIC shall account for all ammunition as it is expended on the firing range. Upon completion of the exercise, the OIC shall ensure all unexpended ammunition is inventoried, verified, and annotated on the Standard Supply Form and the Expenditure Report. If ammunition is found missing during the inventory, the using unit shall submit a Missing, Lost, Stolen, or Recovered Report per reference (m).

g. The OIC shall ensure proper turn-in of ammunition then complete and sign the Expenditure Report and the Standard Supply Form prior to securing from the range, per reference (g).

h. Ammunition shall never be abandoned, destroyed, fired indiscriminately, buried, treated, or otherwise disposed of in order to circumvent the inconvenience of returning the items to a storage area. Units discovering abandoned, buried, or treated ammunition shall notify LONGRIFLE immediately.

i. Ammunition that is authorized to be fired on a particular range may be staged on that range. At a minimum there shall be two armed guards at least one of which is an Non Commissioned Officer. The guards shall maintain hourly radio checks with LONGRIFLE. The range must be scheduled via Range Scheduling. The



OIC shall conduct an inventory of all ammunition prior to departing and upon returning to the range.

j. A checklist for handling and storing ammunition and explosives on ranges is provided on the MCIWEST-MCB CAMPEN website and on the Range Operation Division SharePoint site. Use of the Ammunition and Explosives Range Checklist for Range OICs is recommended.

k. All Security Risk Category 1 (or "CAT I") items (e.g., AT-4, LAW, etc.) shall be positively controlled by an E-6 (or above), from ASP pick-up to expenditure/return of unused ammunition. The E-6 (or above) shall sign, escort, and observe use while maintaining control at all times. Any unused Category One item shall be returned to the ASP by an E-6 (or above).

l. Blank and live ammunition shall never be co-located on any range. A minimum of 24 hours shall pass before a unit can transition from live fire to force-on-force training.

m. Issuing blank and live ammunition at the same time is prohibited.

n. Storing ammunition in a billeting area is prohibited.

o. Requests for a field ASP must be submitted to the Range Control Officer (RCO) through the Explosive Safety Officer at least fourteen days prior to the event. A field ASP must be established any time ammunition/explosives are stored on a range or in a training area where it is not authorized to be fired.

p. Requests for an Ammunition Holding Area within training areas must be submitted to the RCO.

4. Ready Service Lockers (RSL). Range 103, Range 116, Range 130, Range 214, Range 314, and the Infantry Immersive Trainer have RSLs formally sited and established by the Explosive Safety Officer for ammunition storage. Security for ammunition stored in the RSLs is the responsibility of the using unit in accordance with Arms Ammunition and Explosive surveillance requirements.

#### 5. Modifications

a. Modification or "fixing" ammunition charges before shooting is not authorized. If the charges are not fully ready to fire, return them to the local ASP.

b. Mixing or combining DODICs into a single munition is prohibited, unless the DODICs were designed to be integrated (e.g., CS capsules or loose CS powder will not be introduced into smoke grenades in order to generate a smoke/CS cloud).

7002. DEFECTIVE AMMUNITION. Defective ammunition shall not be expended. Every round of ammunition which malfunctions, or does not fire as it is designed shall be reported to the ASP.

7003. MALFUNCTION REPORTS. Detailed malfunction reporting requirements and exceptions are contained in reference (i). Duds, hang fires and misfires should be considered malfunctions for the purpose of reporting. RCS DD-8025-01 is assigned to this reporting requirement.



7004. EXPLOSIVE ORDNANCE DISPOSAL (EOD). The mission of EOD is to remove explosive ordnance hazards posing a threat to personnel, equipment, material, and the installation, which are beyond the capability of other Military Occupational Specialty in the Marine Corps. EOD will provide appropriate technical assistance to units requesting assistance. EOD is not available or responsible for the routine transportation of ammunition and explosives. EOD assistance is available on a 24-hour basis. Contact LONGRIFLE for EOD assistance.

7005. DUDS. With the exception of hand grenade ranges, duds occurring within a dedicated impact area do not normally require an EOD response, but shall be reported to LONGRIFLE with the approximate location. Short rounds, which place the firing unit within the fragmentation radius of the fired munitions require the unit to go into an immediate cease fire and contact LONGRIFLE for EOD support. Duds found outside an impact area, or in a training area, shall be reported to LONGRIFLE immediately. An exact, clearly marked location of the dud is required, a guide made available, and all personnel cleared of the immediate area. Do not disturb a dud in any manner.

7006. MISFIRES AND HANG FIRES. All misfire and hang fire procedures shall be completed on the range. If applicable procedures are unsuccessful, safeties will be reapplied and ammunition will be returned to the ASP as grade three. Munitions that do not qualify for grade three must be destroyed on the range by EOD.

7007. RIOT AGENTS, SMOKE, AND OTHER OBSCURATION MATERIALS

1. Riot agents, smoke, and other obscuration materials shall be used only during scheduled training, per the provisions in applicable technical manuals and directives, and reference (h).

2. Chlorobenzalmalononitrile (CS) Training. The following procedures shall be used when CS capsules or CS grenades are utilized. A current list of CS chambers may be found Appendix E. The intent to use CS shall be specified in the communications tab in Range Facility Management Support System when scheduling training areas.

a. Special Instructions. Information regarding the conduct of the Individual Protective Equipment Confidence Exercise (IPECE) is contained in the ammo can attached to the range pole. The ammo cans contain appropriate safety, IPECE procedures along with RSO instructions, regulations, and a red flag.

b. Use of CS in Training Areas. Units must provide an overlay to Range Scheduling depicting the intended area of CS employment no later than seven days prior to the event. The RSO shall not allow CS/HC smoke to be used:

- (1) Anywhere west of the I-5 Freeway.
- (2) Within 1,000 meters east of the I-5 Freeway.
- (3) Within 1,000 meters of any Base boundaries.

(4) Within 500 meters of any hard-surface roads or built-up areas anywhere aboard Camp Pendleton.

c. Weather Conditions. FDR permitting, a smoke grenade shall be used to check wind direction and agent cloud formation when using CS outside of a designated chamber to calculate downwind analyses.

7008. NONSTANDARD AMMUNITION. Use of nonstandard ammunition and explosive items is prohibited on Marine Corps operational ranges without explicit approval of the CG, Marine Corps Combat Development Command (MCCDC) (C465). The CG, MCCDC (C465) will request and consider a technical review of nonstandard ammunition and explosive items from CG, Marine Corps Systems Command (MARCORSYSCOM) as required. Once the use of nonstandard ammunition and explosives has been authorized by CG, MCCDC (C465), the Base or Station Commander has final approval authority for their use on operational ranges. Commander, Marine Corps Special Operations Command (MARSOC) will validate the need and authorize the use of nonstandard ammunition by MARSOC personnel. Base/Station Commanders will be the approval authority for the use of MARSOC nonstandard ammunition. Authorization to store nonstandard ammunition must be requested from Naval Ordnance Safety and Security Activity via CG, MARCORSYCOM in accordance with reference (b).

7009. BLANK AMMUNITION. The blank firing attachment (BFA) is a necessary component for operational safety. Weapon systems for which approved BFAs are manufactured will not be fired without the proper BFA. The distance at which weapons can be safely fired at unprotected troops without causing injury is somewhat reduced with the BFA. However, 5m safe separation distance will not be reduced. This distance, with a dispersion angle of 10 degrees left and right of the GTL, does not exclude possible injury to the unprotected eye. Hearing protection (ear plugs) should be worn while firing blank ammunition.

CHAPTER 8  
LASER OPERATIONS

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## CHAPTER 8

### LASER OPERATIONS

8000. GENERAL. This Chapter applies to the use of the laser systems specifically designed for military exempt training. Only laser systems approved for use by the Navy Laser Safety Review Board (LSRB) are authorized within the Range and Training Areas aboard Marine Corps Base, Camp Pendleton (MCB CamPen). An LSRB letter specific to each system must be on file with the Range Control Officer (RCO) prior to use. A current list of approved systems can be found in the MCB CamPen Range Facility Management Support System library.

#### 8001. LASER USE ABOARD CAMP PENDLETON

1. All authorized ranges with associated lasing profiles and firing points are discussed in reference (s) and individual range special instructions.
2. Units planning to use lasers aboard Camp Pendleton must schedule Laser Training Areas (LTAs). All LTAs are confined within one of five separate impact areas described in Appendix B.

8002. LASER RANGE SAFETY OFFICER (LRSO). Any unit operating lasers at Camp Pendleton shall assign an LRSO in accordance with reference (e). The LRSO may also serve as the Range Safety Officer after successful completion of the MCB CamPen Range Safety Certification Course. The LRSO must be listed on the unit commander's RM.

#### 8003. LASER SAFETY PROCEDURES

1. General. Only personnel authorized by the unit LRSO shall operate ground lasers on approved ranges and observation posts established per this order, and those listed in the current Laser Survey/Certification.

##### 2. LRSO Firing Logs

a. The LRSO will provide a copy of the laser-firing log to the RCO no later than 24 hours from the completion of the training event per reference (e). The log will contain the date, time, type of lasers, name of the operators, direction, and distance employed.

b. Laser logs shall be maintained on any system categorized as 3b or greater.

APPENDIX A  
DEFINITIONS

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APPENDIX A

DEFINITIONS

Air Sentry	An individual designated by the Range Safety Officer (RSO) to maintain surveillance of an assigned sector of airspace to warn of the approach of aircraft during hazardous activity.
Airspace Coordination Area (ACA)	Three-dimensional blocks of airspace within the Restricted Airspace, established by the Range Control Officer, to separate non-participating aircraft/ UAS from aircraft/ UAS operations within the ACA.
Artillery Firing Area (AFA)	Area established to support artillery firing activities.
Base	Marine Corps Corps Base, Camp Pendleton (MCB CamPen)
Cantonment	An area assigned for administrative and logistical functions, such as housing, troop billeting, offices, storage, and maintenance areas. Normally, field training and live-firing are not conducted within cantonment areas.
CBRN	Chemical, Biological, Radiological, and Nuclear.
Confined Area Landing (CAL) Site	Helicopter landing areas located in Camp Pendleton training areas used for confined area landing practice, external training, etc.
Controlled Firing Area (CFA)	Airspace established to conduct activities that would be hazardous to an on-participating aircraft if not conducted in a controlled environment. It is the range user's responsibility to provide for the safety of persons and property on the surface and to cease firing when aircraft transit the CFA.
Dedicated Impact Area (See Impact Area)	An impact area permanently designated within the training complex. Dedicated impact areas are normally used for non-sensitive munitions.
Drop Zone (DZ)	A tactical landing zone in which personnel or cargo Parachute airdrop operations are authorized.
Dud	Ammunition of any caliber or weight that has been fired, placed, dropped, thrown or launched; but fails to function as designed.
Forward Air Controller (FAC)	A qualified aviator who directs the action of combat aircraft engaged in close air support and other offensive air operations from a forward position.
Field Training Facilities	Those areas designated for a specific type of training, normally not requiring the use of live ordnance (e.g., rappel towers, combat towns).
High Hazard Impact Area (See Impact Area)	An impact area permanently designated within the training complex used to contain sensitive munitions. High hazard impact area access is strictly controlled due to the extreme hazard of dud ordnance.
Impact Area (See Dedicated, High Hazard, and Temporary Impact Area)	The ground and associated airspace within the training complex used to contain fired, placed, dropped, thrown, or launched munitions and/ or explosives - and the resulting



	fragments, debris, and components - from various weapons systems.
Joint Terminal Attack Controller (JTAC)	A qualified individual who directs the action of combat aircraft engaged in close air support and other offensive air operations from a forward position.
Laser Range Safety Officer (LRSO)	A designated individual who has attended the Laser System Safety Course, and has been designated as an LRSO.
Laser Target Area	An area within the Laser Surface Danger Zone with an array of approved laser targets.
Leased Area	Government property within the confines of MCIWEST-MCB CAMPEN that is leased to non-military tenants, such as the State Beach.
Live Fire and Maneuver	A live fire event where one or more elements are maneuvering while supported by direct and/ or indirect fire weapons.
Live Fire and Movement	The simultaneous movement of individuals while conducting live fire.
Malfunction	Failure of a munition to function in accordance with design, intent, or expected performance.
Military Munitions Rule (MMR)	Rule that identifies when conventional and chemical military munitions are or are not considered solid hazardous wastes.
Misfire	Temporary failure or delay in the action of a primer, igniter, or propelling charge.
Mortar Firing Area (MFA)	An area established to support multiple mortar-firing activities from a designated area to a pre-determined target position.
Net Explosive Weight (in pounds) (NEW)	The actual weight of explosive mixture of compound including the TNT equivalent of other energetic material, which is used in the determination of explosive limits and explosive safety quantity distance (ESQD) arcs.
No Fire Area (NFA)	A designated area into which neither live-fire nor effects of live-fire will occur. NFAs are designated by a six-digit grid with a radius in meters.
Non-Lethal	Also known as less than lethal. Pertains to training conducted with munitions not intended to be lethal.
Notice to Airmen (NOTAM)	A message to aircraft pilots in a specific area warning of airspace restrictions, equipment outages, or other factors which may affect flight activities.
Notice to Mariners (NOTMAR)	A publication to mariners and vessels warning of conditions dangerous to navigation, such as live-firing or amphibious exercises.
Observation Post (OP)	A designated area/point from which impacting ordnance may be observed.
Overhead-Fire	The firing of projectiles over the heads of personnel, or over areas in which the presence of personnel is suspected (must be approved in advance by the Range Control Officer).
Parachute Airdrop	The controlled aerial delivery of personnel or equipment by parachute via Low Level Static Line (LLSL), High Altitude High Open (HAHO), or High Altitude Low Open (HALO) techniques.

POL	Petroleum, oil, and lubricants.
Pyrotechnics	Non-injury causing smoke or signals, either flares or grenades. White phosphorous is not considered a pyrotechnic.
Range	A training facility designated for the live firing, placing, dropping, throwing, or launching of munitions from weapons systems.
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.
Reconnaissance, Selection and Occupation of Positions (RSOP)	Non live fire artillery or mortar area for training events in which units conduct reconnaissance, selection, and occupation of positions.
Restricted Airspace	Airspace designated under Federal Aviation Regulations, Part 73, within which the flight of non-participating aircraft, while not wholly prohibited is subject to restriction.
Restricted Operating Zone (ROZ)	Three-dimensional blocks of airspace within the Restricted Airspace, established by the Range Control Officer, to separate non-participating aircraft/ UAS from aircraft/ UAS operations within the ROZ. A ROZ is normally associated with a UAS launch and recovery site.
Surface Danger Zone (SDZ)	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 weapon systems to include explosives and demolitions.
Survey Control Point	A permanent or semi-permanent concrete or brass marker placed to denote a topographical reference point.
The Tactical Air Control Party (TACP)	A small team of personnel providing airspace de-confliction and terminal control of close air support.
Temporary Impact Area (See Impact Area)	An impact area within the training complex used for a limited period of time. Temporary impact areas are normally used for non-dud producing munitions.
Terrain Flight (TERF) Route/Area	A route/area used for helicopter low altitude navigation training.
Training Area	All areas on Camp Pendleton outside of cantonment and impact area boundaries.
Weapons Danger Zone	The ground and airspace for lateral and vertical containment of weapons, munitions, projectiles, fragments, components and debris resulting from the firing, launching, and/or detonation of aviation-delivered ordnance.

APPENDIX B  
IMPACT AREAS

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APPENDIX B

1. GENERAL

a. Zulu Impact Area. A high hazard impact area bound by a line starting at a point near the intersection of Basilone Road and Range 223 Roads at grid 61797 90890, following Range 223 Road generally North to grid 61746 91503, to grid 60960 92204, to grid 60885 92213 on Range 222 Road, following the road generally West to grid 60365 92008, then generally Northwest along trail paralleling Basilone Road to intersection with Horno Canyon Road at grid 59649 92959, following Horno Canyon Road generally northeast to grid 64982 97042, to grid 66116 96178, to grid 66159 94228, to grid 67090 93330 at the intersection of Roblar and Tower Roads, following Roblar Road generally South to 66547 91896 at intersection with Range 407 Road, following generally West along Range 407 Road to 63956 89850, continuing along unnamed trails to grid 63239 90457, to grid 62650 90855, to grid 62423 90435, to grid 62310 90152, to grid 62183 90294, to grid 62115 90234, then parallel with Basilone Road generally northwest to the beginning.

b. Whiskey Impact Area. A high hazard impact area bound by a line starting at a point near the intersection of Range 212 and Range 212A Roads at grid 54894 93950, to grid 54737 94314, to grid 53871 95285, to grid 53982 95888, following Jardine Canyon Road generally north to grid 55350 99362, then generally northeast to intersection with Tate Road at grid 57646 01251, following Case Springs Road generally East to grid 62253 00011, then generally South parallel with firebreak to grid 62486 99228, to grid 62586 98695, following firebreak generally East to grid 64030 98171, then generally South along firebreak to intersection with Horno Canyon Road at grid 64382 96677, following Horno Canyon Road generally southwest to a point near Basilone Road on unnamed trail at grid 59650 92958, then generally West along trail to intersection with Range 218A Road at grid 58212 93582, following Range 218A Road generally West to intersection with Range 214 Road at grid 56308 93407, following Range 214 Road generally North to grid 56433 93892, then generally northwest along road to 56146 94097, to grid 55389 94080, then generally West along Range 212 Road to the beginning.

c. Quebec Impact Area. A high hazard impact area bound by a line starting at a point at grid 53700 96000, to grid 52200 96600, to grid 51700 97500, following firebreak generally Northwest to grid 51353 97711, continuing along firebreak generally northeast to grid 51578 97971, following firebreak generally Northwest to grid 51222 98281, to grid 51277 98583, to grid 51355 98904, to grid 51511 99091, following Range 314 Road generally northeast to grid 51805 99306, to grid 52400 00099, to grid 55200 99400, to grid 54800 98200, to grid 54800 97200, to grid 54500 96600, to the beginning.

d. Edson Range Impact Area. A dedicated impact area bound by a line starting West of the 31 Area at grid 59722 81533, and running generally northeast along South Aliso Canyon Road to a point at grid 61510 84283, to grid 61827 84393, then generally Southeast to the vicinity of the 32 Area border at grid 63723 83124, then generally along Cocklebur Canyon to the Southwest to grid 62089 80701, then generally Northwest along the Northern portion of the 31 Area behind the Edson lettered ranges to grid 60447 81197, to grid 60063 81086, to the beginning.

e. X-Ray Impact Area. A dedicated impact area bound by a line starting near Range 131 at grid 61764 84684, and running generally north behind the Range 130 Complex to grid 61343 86015, then to grid 61499 88583, then generally along the Las Flores Creek to grid 62537 89703, then generally along Basilone Road to grid 64944 89567, to grid 65746 89190, to grid 64848 87765, then west of the 33 Area to grid 65662 85013, then generally along Stage Coach Road to grid 64364 84255, then generally West to the beginning.

f. 409A Impact Area. A dedicated impact area bound by a line starting at a point near the intersection of Roblar and Tower Roads at grid 67096 93329, to grid 68064 93153, to grid 68322 93339, to grid 68507 93416, to grid 68537 93462, to grid 68542 93520, to grid 68468 93662, to grid 67965 96543, to installation boundary at grid 66019 99043, to grid 64966 99009, to grid 64086 98263, following firebreak generally southwest to grid 64028 98174, continuing generally South to intersection with Horno Ridge Road at grid 64351 96715, following Horno Ridge Road generally northeast to grid 64982 97042, to grid 66116 96178, to grid 66159 94228, to the beginning.

g. Yankee Impact Area. A dedicated impact area bound by a line starting at a point on San Mateo Canyon Road at grid 52224 00538, following San Mateo Canyon Road generally northeast to intersection with Tate Road at grid 55648 03251, following Tate Road generally southeast to intersection with Jardine Canyon Road at grid 57646 01251, then following Jardine Canyon Road generally Southwest to grid 55349 99360, to grid 52400 00100, to the beginning.

2. RANGES NOT WITHIN IMPACT AREAS. The following ranges (also listed in Appendix C of this Manual) are not within the boundaries of the impact areas delineated above: R-107, R-127, R-206, R-207, R-207A, R-300, R-301, R-301B, R-302, R-303, R-307, and R-403. Surface impact areas associated with these ranges are depicted on the current edition of the Marine Corps Base, Camp Pendleton Military Installation Map.

### 3. SIGNS AND ENTRY

a. Signs. Impact area and range boundaries are marked with red warning signs stating, "DANGER - IMPACT AREA - KEEP OUT." Signs are posted at approximately 200-meter intervals in prominent locations.

#### b. Entry.

(1) For access into an impact area, the unit/organization shall submit a request to the Range Control Officer (RCO) no later than 30 days prior to the event. The request should include the rationale for access, as well as a detailed description of the requirement.

(2) Access into a high hazard impact area requires the RCO to complete a worksheet (Figure B-1) in order to determine the types of munitions, most hazardous munitions, and UXO densities expected during access. Based on the worksheet information provided by the RCO, the unit/organization requesting access shall complete an RM worksheet, to include signature by the command, and submit to the RCO for final approval.

(3) Marine Corps Installations West-Marine Corps Base, Camp Pendleton high hazard impact area access approval will occur at the command level



correlated with the below listed Risk Assessment Code. A confirmation brief shall be conducted at the appropriate level of authority.

- (a) Negligible - RCO
- (b) Minor - RCO
- (c) Moderate - Director Range Operations
- (d) Serious - Assistance Chief of Staff G-3/5
- (e) Critical - Commanding General

(4) Access into high hazard impact areas may require escort by Explosive Ordnance Disposal (EOD).

(5) The unit/organization is expected to provide an after action report to the RCO to validate the impact area access risk assessment based on actual munitions encountered.

(6) High hazard impact areas may be utilized by EOD personnel to satisfy training requirements for Unexploded Ordnance (UXO) operations. Training for UXO operations include surface area clearance, standoff munitions disruption, render safe, and explosive ordnance reduction. The minimum rank for the Range Safety Officer of UXO training in Camp Pendleton high hazard impact areas will be a Gunnery Sergeant. UXO training events will be limited to a maximum of 30 personnel in the impact area.

(7) For RM planning purposes, the current impact area hazard assessment map is located on the Range Operations Division SharePoint site.

(8) Permission to enter an impact area may be granted only by LONGRIFLE as approved by the RCO.

(9) Permission to travel established roads (San Mateo Canyon, DeLuz Canyon entrance to R-409A, Aliso Canyon, or Roblar Roads) through impact areas may be granted only by LONGRIFLE.

(10) Entry into the Quebec, Whiskey, and Zulu Impact Areas and Jardine Canyon for hunting is prohibited.



High Hazard Impact Area Access Worksheet					
****SAMPLE***** Target Insert - R226 ****SAMPLE*****					
The Rational for Access		Received request from I MEF SOTG during face to face meeting on 06 February to insert targets ISO Live Fire raid on R226. Target locations in request were forward of R226 and would be used to support Sniper engagements during raid.			
The Number of Personnel Required		2 Range Safety Specialists, 3 EOD Technicians and 10 to 15 personnel from supported unit.			
Support Requirements		2 Range Control GOV, 2 EOD GOV, 3 Unit GOV/Tactical Vehicles.			
Types of Military Munitions Anticipated		40MM HE, 40mm HEDP, 60MM HE			
Most hazardous Expected		40mm HEDP			
Expected UXO Densities - 1 January 2013 to 19 February 2014					
Facility	DODIC	Nomenclature	Quantity Fired	Historical DUD Rate (%)	Expected UXO Qty.
R226	B571	CTG 40MM HE W/M16A2 LINKS	698	10%	70
	B546	CTG 40MM HEDP M433W/FUZE PIBD M550	1500	10%	150
	B542	CTG 40MM HEDP M430 W/FUZE M549 W/M16A2 LINKS	510	10%	51
	M720	60MM HE	988	2%	20
<b>Sequence of Events</b>					
<ol style="list-style-type: none"> <li>1. Contacted EOD to determine supportability.</li> <li>2. Coordinated with I MEF SOTG to conduct target insert on 19 February at 0600.</li> <li>3. All personnel and support assets will muster at R226 for safety brief and dud brief.</li> <li>4. Vehicles will drive to edge of limit of penetration for R226. Prior to entry into Zulu Impact and Range Safety Spec will request entry from LONGRIFLE.</li> <li>5. EOD Technician will ground guide vehicles from entry point at grid 627 907 to target staging area location at 629 909.</li> <li>6. EOD Technician will conduct safety assessment of target area.</li> <li>7. Once safety assessment is complete, personnel will walk to target locations 62821 90949 &amp; 62904 90902 to insert targets.</li> <li>8. Once safety assessment is complete, Range Safety Specialist will supervise target insert to ensure targets are emplaced within approved lateral limits.</li> <li>9. Upon completion of target emplacement, EOD Technician will ground guide vehicles back to exit point.</li> <li>10. Upon departure of all personnel and vehicles, Range Safety Specialist will contact LONGRIFLE.</li> </ol>					
Types of Military Munitions Encountered - TBD Will be reported on extract assessment.					

Figure B-1

APPENDIX C  
RANGE MATRIX

PAGE

RANGE MATRIX.....C-2

RANGE	DESCRIPTION	CMP/ EMP	Pistols .45 & Below	Misc.			RIFLES			Machine Guns			Demo & Mines				Grenades & Launchers		Rocket & Missiles			Cannons & Mortars					Tank, APC & Aerial Gunnery					Lasers																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
				Shotguns	Sub-Gun	SESA MS	5.56mm	300 WMN MAG	7.62mm	.50 Cal	5.56MM	7.62MM	.50 Cal	Demolitions NEW Listed	Claymore & Bangalore	APOBS & MICLIC	Anti-Tank Mine	Grenade Launchers	Hand Grenade	Rockets	Missiles	Artillery	Mortars	120mm	25mm & 30mm	M257 Smk Gren	Avlation TOW	20mm	25 mm	30mm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
102	Pistol Range (KD)		X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		



RANGE	DESCRIPTION	Misc.				RIFLES				Machine Guns		Demo & Mines				Grenades & Launchers		Rocket & Missiles		Cannons & Mortars		Tank, APC & Aerial Gunnery						Lasers								
		CMP/ EMP	Pistols .45 & Below	Shotguns	Sub-Gun	SESA MS	5.56mm	300 VMNMA G	7.62mm	.50 Cal	5.56MM	7.62MM	.50 Cal	Demolitions NEW Listed	Claymore & Bangalore	APOBS & MICLIC	Anti-Tank Mine	Grenade Launchers	Hand Grenade	Rockets	Missiles	Artillery	Mortars	120mm	25mm & 30mm	M257 Smk Gren	Aviation TOW		20mm	25 mm	30mm	2.75"	5 INCH	LRSB		
133	QGB Shoot House		7	8		X	47,55		70		70		X	X			8																			
201	Field Fire	Yes	X	X																																
202	Hand Grenade Range																																			
203	Field Firing Range		X	X			X		X		X	71	X	X	X	71						X													X	
204B	Field Firing Range						64				64		64	64								76													X	
206	BZONon-Lethal Range	Yes	X	X			X				24		24	24																						
207	Demolition Range																2lbs																			
207A	MOUTBreaching					8		X	33		33	33	33	33	33		.18lbs																			
208C	Offensive Cmbt Range	Yes	X	X			X	X		X	X	X	X	X				X	19																X	
210B	100 METER BZO ONLY									X																										
210C	EMP/BZO Range	Yes	X	X	X		47						X																						X	
210D	M203 Qual Range																																		X	
210E	Field Firing Range	Yes	X	X			X		X		X		X	X	X																				X	
210F	BZO/Field Firing Range	Yes	X	X			X		X	X	X	X	X	X	X	X			18	19														X		
210W	Scout Sniper/LAV										87	87	87		97																					
211	Demolition Range			8													15lbs																			
211A	Breacher Range			8			X	55									45																			
212 Complex	BZONon Lethal	Yes	X	X			X																												X	
213	Pistol Range		X																																	
214	Rifle Range										X		X																						X	
215A	Offensive Field Firing	Yes	X	X			X	X		X	X		X	X																					46	
216	SACONEM/Field Firing	Yes	X	X			X	X		X		X	X	X	X	X	81.25 NEW																		X	
217	Field Firing		X				49		49		49		X	X																					X	
218A	Inf Sqd Def & Off Firing	Yes	X	X			52		52	52	X	X	X	X	X																				X	
219	Demolition Range			8													40/50lbs	X																	X	
221	Field Firing Range	Yes	X	X			X		X		X	X	71	71	71																				X	
222	Field Firing Range										X		X	X	X	99																			X	
223A	Shoot House/TT Range	Yes	X	86	X	85	84		49								.18lbs																		X	
223B	MPMG/Offensive Field	Yes	X	X			87		87	87	X	X	X	X	X																				X	
225	Field Firing Range			16															16	16																

RANGE	DESCRIPTION	CMP/ EMP	Misc.				RIFLES				Machine Guns		Demo & Mines				Grenades & Launchers	Rocket & Missiles	Cannons & Mortars	Tank, APC & Aerial Gunnery						Lasers																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
			Pistols .45 & Below	Shotguns	Sub-Gun	SESA MS	5.56mm	300 WINMAG	7.62mm	.50 Cal	5.56MM	7.62MM	.50 Cal	Demolitions NEW Listed	Claymore & Bangalore	APOBS & MICLIC	Anti-Tank Mine	Grenade Launchers	Hand Grenade	Rockets	Missiles	Artillery	Mortars	120mm	25mm & 30mm		M257 Smk Gren	Aviation TOW	20mm	25 mm	30mm	2.75"	5 INCH	LRSB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
227	Field Firing Range	Yes	X	X			X		X		X	X	71					17/37		X		X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													



RANGE	DESCRIPTION	Misc.				RIFLES				Machine Guns	Demo & Mines				Grenades & Launchers	Rocket & Missiles	Cannons & Mortars	Tank, APC & Aerial Gunner				Lasers													
		CMP/ EMP	Pistols .45 & Below	Shotguns	Sub-Gun	SESA MS	5.56mm	300 WINMAG	7.62mm		.50 Cal	5.56MM	7.62MM	.50 Cal				Demolitions NEW Listed	Claymore & Bangalore	APOBS & MICLIC	Anti-Tank Mine		Grenade Launchers	Hand Grenade	Rockets	Missiles	Artillery	Mortars	120mm	25mm & 30mm	M257 Smk Gren	Aviation TOW	20mm	25 mm	30mm
505	Infiltration Range						33		33		33	33																							
600	Demolition Range			4/8									4234	X	X																				X
LFAM 219	Offensive Combat		X	X		X	X	X	X	X	X		58				48	45	77				X												X
LFAM 223B	Offensive Combat		X	X		X			X	X	X		20lbs	18	19		X	79	X				X												X
R 226	Urban Combat		X	X		X	55		X		X		26lbs				48		X			X													X
LFAM 600	Live-Fire & Maneuver	Yes	X	X		X	X	X	X	X	X	X			45		X	X	X				X							57					X
LFAM 702	Unknown Distance Sniper						7		7																										X
LFAM 703	OFF COMBAT LFAM, TACP		X	X		X	X	X	X	X	X	X		58			59	389	45				X												X
LFAM 706	Live-Fire & Maneuver					X	X		X	X	X	X	15lbs	60			59	61	45				X												X
LFAM 710A	Live Fire Convoy		X	X			X	X	X	X	X	X					45																		
LFAM 710B	Live-Fire & Maneuver		X				X		X	X	X	X					45			45		45	45					X	82						
800	Live-Fire & Maneuver	Yes	X	X		X	X	X	X	X	X	X	20lbs	X	X		X	X	X	94		X													X
Edson A	A, B, C, D Rifle KD	Yes					X																												X
Edson B	A, B, C, D Rifle KD	Yes								X																									
Edson C	A, B, C, D Rifle KD	Yes								X																									
Edson D	A, B, C, D Rifle KD	Yes					X																												
Edson Pistol	Pistol P-1 to P-3		X	X																															X
R220	R220 Whiskey Impact									X	X	X																							X
R220 TACP MFA	R220 Whiskey Impact TACP										X	X	X																						X
7											X	X	X																						
R220 OP M	R220 Whiskey Impact TACP										X	X	X																						X
R440	R440 Zulu Impact										X	X	X																						X
R440 TACP	R440 Zulu Impact TACP										X	X	X																						X



[illegible]

APPENDIX D

INDIRECT FIRE TRAINING AREAS

	<u>PAGE</u>
ARTILLERY FIRING AREAS.....	D-2
MORTAR FIRING AREAS .....	D-3
OBSERVATION POSTS.....	D-4

APPENDIX D

1. ARTILLERY FIRING AREAS

a. Listed below are the designated Artillery Firing Areas (AFAs).

AFA	Geo Location	Grid	Alt Ft MSL	Remarks
AFA 01	San Mateo	11SMT 54206 03004	NA	RSOP
AFA 02	San Mateo	11SMT 53817 02530	NA	RSOP
AFA 04	San Mateo	11SMS 50312 99854	NA	IED Lanes
AFA 05	San Mateo	11SMS 50113 98957	310	Conflict with HOLF
AFA 06	San Mateo	11SMS 49700 99140	335	Conflict with HOLF
AFA 07	San Mateo	11SMS 47930 99460	560	Conflict with HOLF
AFA 08	Papa	11SMS 57900 92750	710	
AFA 09	Papa	11SMS 59253 94463	NA	RSOP
AFA 10	Papa	11SMS 60429 92141	NA	RSOP
AFA 11	Papa	11SMS 58890 91690	500	Whiskey Only
AFA 12	Papa	11SMS 57820 91310	610	
AFA 13	Papa	11SMS 59464 90642	NA	RSOP & DZ Papa 3
AFA 14	Coastal	11SMS 55520 86880	175	Firing requires activation of R2503D.
AFA 15	Coastal	11SMS 56232 86307	185	Firing requires activation of R2503D.
AFA 16	Coastal	11SMS 57260 85480	135	Firing requires activation of R2503D.
AFA 17	Roblar	11SMS 62547 90275	NA	RSOP
AFA 18	Roblar	11SMS 62790 89916	305	
AFA 19	Roblar	11SMS 64592 89469	NA	RSOP
AFA 21	Roblar	11SMS 65583 90335	530	
AFA 22	Roblar	11SMS 66700 87700	215	Within DZ Basilone
AFA 24	Roblar	11SMS 67900 89500	435	
AFA 25	Roblar	11SMS 66590 90187	NA	RSOP
AFA 26	Roblar	11SMS 66890 90510	520	
AFA 27	Roblar	11SMS 67373 90467	450	
AFA 28	Roblar	11SMS 68253 91021	680	
AFA 29	Roblar	11SMS 67970 91381	NA	RSOP
AFA 30	Roblar	11SMS 66250 90850	550	
AFA 31	Roblar	11SMS 66630 91909	690	HIMAR
AFA 32	Roblar	11SMS 67120 93140	950	HIMAR
AFA 33	Roblar	11SMS 67450 92650	805	
AFA 34	Roblar	11SMS 70371 92376	350	
AFA 35	Roblar	11SMS 70481 93078	330	
AFA 36	R409A	11SMS 68165 92607	NA	RSOP



18 OCT 2018

AFA	Geo Location	Grid	Alt Ft MSL	Remarks
AFA 37	R409A	11SMS 67316 94367	985	
AFA 38	R409A	11SMS 67787 94457	1025	
AFA 39	Roblar	11SMS 72010 95929	715	DZ DeLuz & HIMAR
AFA 40	Case	11SMS 63799 98919	2525	
AFA 41	Case	11SMS 62828 99312	2475	
AFA 42	Case	11SMT 62601 00435	2455	
AFA 43	Case	11SMT 60282 00360	2120	
AFA 44	Case	11SMT 61400 01600	2300	
AFA 45	Case	11SMT 60912 01844	NA	RSOP
AFA 46	Case	11SMT 58804 01649	NA	RSOP
AFA 90	Juliet	11SMS 73942 87433	NA	RSOP
AFA 91	Juliet	11SMS 74637 85994	NA	RSOP
AFA 92	Juliet	11SMS 79260 85503	NA	RSOP
AFA 93	Mike	11SMS 65916 81583	NA	RSOP
AFA 94	November	11SMS 68219 80889	NA	RSOP
AFA 95	November	11SMS 67313 79111	NA	RSOP
AFA A	San Mateo	11SMT 55440 03360	395	
AFA C	Case	11SMT 61429 00421	NA	RSOP
AFA D	Case	11SMT 61852 00726	NA	RSOP
AFA F	Roblar	11SMS 71236 94409	795	
AFA G	Papa	11SMS 58758 90097	445	
AFA H	San Mateo	11SMT 51875 00085	270	HIMAR
AFA I	San Mateo	11SMT 52764 01078	290	HIMAR
AFA J	Finch	11SMS 57212 93682	NA	RSOP
R407	Zulu	11SMS 64755 91255	560	Direct Fire
R408A	Zulu	11SMS 65203 91874	575	Direct Fire

## 2. MORTAR FIRING AREAS

a. Listed below are the designated Mortar Firing Areas (MFAs).

MFA	Geo Location	Grid	Alt Ft MSL	Remarks
MFA 5	Jardine Canyon	11SMS 55218 97168	440	
MFA 6	Yankee Impact	11SMT 56344 00169	850	
MFA 7	Yankee Impact	11SMT 57635 00619	1550	
MFA 9	TA-Echo	11SMS 62121 99113	2570	
MFA 9A	TA-Echo	11SMS 63076 99662	2420	

MFA	Geo Location	Grid	Alt Ft MSL	Remarks
MFA 10	R409A	11SMS 66473 94994	975	
MFA 11	TA-Kilo 1	11SMS 65133 90880	475	
MFA 12	MP-1	11SMS 63786 90455	500	
MFA 13	R227	11SMS 63137 90375	350	
MFA 14	R221/222	11SMS 60118 92629	675	
MFA 15	LFAM 219	11SMS 58878 93526	550	

3. OBSERVATION POSTS

a. Listed below are the designated Observation Posts (OPs).

OP LOCATIONS	COORDINATES	REMARKS
A	11SMS 636 900	Hand-held lasers allowed
B	11SMS 640 904	Hand-held lasers allowed
C	11SMS 642 919	Inactive
D	11SMS 643 906	Hand-held lasers allowed
E	11SMS 643 921	Marking for southern AFA's
F	11SMS 666 926	Hand-held lasers allowed
I	11SMS 649 968	Designation into the Zulu Impact Area is not authorized
J	11SMS 596 995	Hand-held lasers allowed
Jacob	11SMT 576 006	
K	11SMS 566 938	Inactive
M	11SMS 617 989	Marking for northern AFA's
NOAH	11SMS 630 972	Observation of HIMAR
Q	11SMS 513 977	
W	11SMS 545 953	Marking for northern AFA's

b. PROCEDURES FOR USE

(1) Observation Posts being utilized SOLELY for observation of indirect fire do not require a Range Safety Officer (RSO). Positive communication with the RSO of the firing unit is required.

(2) Scheduling. OP's shall be scheduled through the Range Scheduling Office prior to conducting training.

(3) Temporary OP's. Special requests to use other terrain for OP's shall be submitted to the Range Scheduling Office. Units shall identify the coordinates, intended purpose, and time periods.



APPENDIX E

CHLOROBENZALMALONONITRILE (CS) TRAINING CHAMBERS

PAGE

CS TRAINING CHAMBERS.....	E-2
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APPENDIX E

CS TRAINING CHAMBERS

1. The CS chambers listed below are authorized for use by units conducting Individual Protective Equipment Confidence Exercises (IPECEs).

LOCATION	GRID	DESCRIPTION	SCHEDULED BY
14 Area	11SMS 737 859	Concrete Block Structure	Range Scheduling
20 Area	11SMS 654 782	Concrete Block Structure	Range Scheduling
31 Area	11SMS 630 808	Metal Structure	Range Scheduling
33 Area	11SMS 668 860	Concrete Block Structure	Range Scheduling
41 Area	11SMS 606 839	Concrete Block Structure	Range Scheduling
43 Area	11SMS 611 889	Concrete Block Structure	Range Scheduling
53 Area	11SMS 556 926	Concrete Block Structure	Range Scheduling
62 Area	11SMS 487 990	Concrete Block Structure	Range Scheduling

APPENDIX F

AVIATION FACILITIES

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APPENDIX F

AVIATION FACILITIES

1. ADMINISTRATIVE LANDING ZONES. Administrative landing zones are located within base cantonment areas. Area Commanders must approve use.

Site	Location		Remarks
LZ-11	11SMS 71211 85194	33° 19'18"/ 117° 18'33"	East side of 11 Area parade field adjacent to 1stMarDiv HQ; unmarked.
LZ-16	11SMS 70134 84552	33° 17'58"/ 117° 19'14"	Approximately 880 X 200 ft unmarked parking lot. Unit must coordinate security to ensure the area is clear prior to operations.
LZ-20	11SMS 63849 75605	33° 13'07"/ 117° 23'16"	Landing pad supporting Camp Pendleton Naval Hospital.
LZ-21/ Pelican Point	11SMS 62580 75028	33° 12'49"/ 117° 24'05"	140 X 140 ft concrete pad located on the Del Mar Area boat ramp. Approaches and departures must remain over inlet to the Northwest of the zone; remain clear of housing and dirt areas.
LZ-22	11SMS 67813 83796	33° 17'33"/ 117° 20'44"	Approximately 550 X 175 ft asphalt area; 22 Area parade deck.
LZ-27	11SMS 69812 89109	33° 20'26"/ 117° 19'27"	50 X 50 ft lighted concrete pad.
LZ-31	11SMS 60650 80470	33° 15'45"/ 117° 25'20"	140 X 140 ft marked portion of 31 Area parade deck. In close proximity to Edson live fire ranges.
LZ-32	11SMS 63961 82166	33° 16'40"/ 117° 23'13"	Approximately 200 X 200 ft of marked Marston matting. Within MCAS CAMPEN Class D surface area when airfield is open.
LZ-33	11SMS 65548 85491	33° 18'28"/ 117° 22'12"	Dirt surface between football and baseball fields. Within MCAS CAMPEN Class D surface area when airfield is open.
LZ-43	11SMS 62062 89614	33° 20'42"/ 117° 24'27"	Approximately 130 X 130 ft marked asphalt pad along Las Pulgas Road.
LZ-52	11SMS 52036 94950	33° 23'33"/ 117° 30'56"	Approximately 100 X 100 ft marked concrete pad.
LZ-53	11SMS 55603 93757	33° 22'55"/ 117° 28'38"	53 Area parade deck.
LZ-62	11SMS 48591 98044	33° 25'13"/ 117° 33'10"	Dirt surface adjacent to baseball field.
LZ-64	11SMT 47954 01738	33° 27'13"/ 117° 33'36"	Approximately 30 X 30 ft steel matting pad.

2. TACTICAL LANDING ZONES

Site	Location		Remarks
HLZ/ Heavy Lift Pad	11SMS 48061 99499	33° 26'01"/117° 33'31"	Approximately 600 X 600 ft lighted pad with windsock and LPD markings.
LZ Blue Bird	11SMS 62982 99620	33° 26'07"/117° 23'53"	Supports assault landings in the vicinity of OP Mike.
LZ Buzzard	11SMT 61493 00685	33° 26'41"/117° 24'51"	Supports assault landings in the vicinity of R800. (Inactive).
LZ Canary	11SMT 62598 00440	33° 26'34"/117° 24'06"	Located within AFA 42, and supports assault landings in the vicinity of OP Mike.
LZ Cardinal	11SMS 49534 96566	33° 24'26"/117° 32'34"	Located in a box canyon next to R-301 and IVO CBT B3.
LZ Condor	11SMS 46953 99126	33° 25'48"/117° 34'14"	Field adjacent to Christianitos Road.
LZ Cowbird	11SMS 62605 90348	33° 21'05"/117° 24'06"	Located adjacent to Zulu Impact Area, and designed to support operations at R-226.
LZ Crow	11SMS 54292 88090	33° 19'51"/117° 29'28"	Located East of I-5 IVO CBT ECR.
LZ Eagle	11SMS 61841 84676	33° 18'01"/117° 24'35"	Supports training at R-131 MOUT facility. Contact R-131 MOUT Staff 24 hours prior to use.
LZ Falcon	11SMS 60293 99922	33° 26'16"/117° 25'38"	Supports assault landings in the vicinity of R800. (Inactive).
LZ Fallbrook	11SMS 74813 87303	33° 19'29"/117° 16'08"	Along Eastern border of Base boundary. Avoid overflight of civilian housing below 2500 ft AGL.
LZ Gnatcatcher	11SMS 63080 98680	33° 27'13"/117° 33'36"	Supports assault landings in the vicinity of OP Mike. (Inactive).
LZ Hawk	11SMT 61104 01266	33° 27'13"/117° 33'36"	Supports assault landings in the vicinity of R800. (Inactive).
LZ Horno	11SMS 57643 91604	33° 21'46"/117° 27'19"	Located within AFA 12.
LZ Kingfisher	11SMS 55589 91126	33° 21'30"/117° 28'38"	Supports operations at CBT Horno Canyon.

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Site	Location		Remarks
LZ Ostrich	11SMS 64167 88978	33° 20' 21"/117° 23' 06"	Located between the 500-yard and 600-yard firing on R-116A.
LZ Peregrine	11SMS 61838 85738	33° 27' 13"/117° 33' 36"	Support training at R-130. Contact R130 Range Manager 48 hours prior to use.
LZ Raptor	11SMS 50294 99882	33° 26' 14"/117° 32' 05"	Under traffic pattern for HOLF.
LZ Red Beach	11SMS 56933 83391	33° 17' 19"/117° 27' 45"	Beach area between LHA Pad and VTOL Pad 1.
LZ Roadrunner	11SMS 46906 96478	33° 24' 22"/117° 34' 15"	Supports IIT.
LZ Robin	11SMT 60384 00336	33° 26' 29"/117° 25' 36"	Supports assault landings in the vicinity of R-800. (Inactive).
LZ Sparrow	11SMS 68167 93617	33° 22' 53"/117° 20' 32"	Supports R-409. (Inactive).
LZ Starling	11SMS 62031 91231	33° 21' 35"/117° 24' 29"	Supports assault landings between R225 and R223A.
LZ Swallow	11SMS 62067 99078	33° 25' 48"/117° 24' 30"	Supports OP Mike. (Inactive).
LZ Toucan	11SMS 68018 87947	33° 19' 55"/117° 20' 37"	Supports 25 Area CBT.
LZ Turkey	11SMS 68079 93686	33° 22' 55"/117° 20' 35"	Supports R409.
LZ Viewpoint	11SMS 54447 86811	33° 18' 00"/117° 28' 08"	300 X 130 ft concrete pad with two landing spots located on Gold Beach.
LZ Vulture	11SMS 50966 94830	33° 23' 29"/117° 31' 38"	Supports 52 Area Combat Town.
TALA	11SMS 65631 79722	33° 15' 21"/117° 22' 08"	Within MCAS CAMPEN Class D surface area when airfield is open.

### 3. CONFINED AREA LANDING (CAL) SITES

Site	Location		Remarks
1	11SMS 64453 81081	33° 16' 05", 117° 22' 54"	Within MCAS CAMPEN Class D surface area when airfield is open.
2	11SMS 67751 81204	33° 16' 10", 117° 20' 47"	Within MCAS CAMPEN Class D surface area when airfield is open.
3	11SMS 69937 92678	33° 22' 22", 117° 19' 24"	
4	11SMS 70248 94120	33° 23' 09", 117° 19' 12"	



Site	Location		Remarks
5	11SMS 71977 95970	33° 24'08", 117° 18'04"	
7	11SMS 66544 97881	33° 25'11", 117° 21'35"	
8	11SMS 63064 98682	33° 25'37"/ 117° 23'50"	
9	11SMT 61087 01287	33° 27'01", 117° 25'07"	
10	11SMT 59517 01663	33° 27'13", 117° 26'08"	
13	11SMT 49553 99978	33° 26'17", 117° 32'34"	(Inactive).
14	11SMS 48706 99815	33° 26'11", 117° 33'07"	(Inactive).
15	11SMS 47843 99479	33° 26'00", 117° 33'40"	(Inactive).
16	11SMS 48839 96708	33° 24'30", 117° 33'01"	
17	11SMS 52253 92248	33° 22'06", 117° 30'48"	
18	11SMS 57592 90383	33° 21'07", 117° 27'21"	
19	11SMS 58362 88537	33° 20'07", 117° 26'51"	
20	11SMS 53591 87798	33° 19'42", 117° 29'55"	33 X 33 ft concrete pad marked to simulate LPD.
21	11SMS 57614 82702	33° 16'57", 117° 27'18"	Within close proximity to VTOL Pad 1.
22	11SMS 55786 86418	33° 18'58", 117° 28'30"	
23	11SMS 58856 84091	33° 17'42"/ 117° 26'31"	In close proximity to numerous vernal pools. It is imperative to accurately identify the CAL Site location.
24	11SMS 49943 93384	33° 22'43"/ 117° 32'17"	

4. RUNWAYS AND VERTICAL TAKEOFF AND LANDING (VTOL) SITES

Site	Location		Remarks
HOLF	11SMS 50503 99454	33° 25'59"/117° 31'56"	Helicopter Outlying Field - two 3000 X 100 ft runways (Concrete surface 22R/04L and Grass surface 222L/04R).
VTOL 101	11SMS 56064 85508	33° 18'28"/117° 28'51"	3000 X 50 ft concrete runway. Part of active roadway (old Highway 101). Requires road guards and coordination 60 working days prior to event.

Site	Location		Remarks
VTOL Pad 1	11SMS 57548 83035	33° 17'08"/117° 27'13"	800 X 100 ft AM-2 matting runway Heading 09/27. 100 ft x 100 ft landing pad. Within close proximity to CAL Site 21.
VTOL Pad 2	11SMS 60078 82014	33° 16'35"/117° 25'08"	140 X 140 ft concrete pad. Variable intensity pilot controlled lighting (VHF 126.2).

5. FIELD CARRIER LANDING PRACTICE (FCLP) SITES

Site	Location		Remarks
CAL Site 20	11SMS 53591 87798	33° 19'42", 117° 29'55"	33 X 33 ft concrete pad marked to simulate LPD.
HLZ/ Heavy Lift Pad	11SMS 48061 99499	33° 26'01"/117° 33'31"	Approximately 600 X 600 ft lighted pad with windsock and LPD markings.
LHD Pad	11SMS 56346 84646	33° 18'00"/117° 28'09"	820 ft x 125 ft AM-2 matting marked to simulate LHD.

6. AIRCRAFT REFUELING SITES. The following training facilities are approved aviation refueling sites.

Site	Location		Remarks
AFA-22	11SMS 66700 87700	33° 19'40"/117° 21'28"	Within DZ Basilone.
AFA-31	11SMS 66630 91909	33° 21'57"/117° 21'31"	
AFA-40	11SMS 63799 98919	33° 25'44"/117° 23'21"	
AFA-41	11SMS 62828 99312	33° 25'57"/117° 23'59"	
HOLF	11SMS 50503 99454	33° 25'59"/117° 31'56"	Helicopter Outlying Field - two 3000 X 100 ft runways (Concrete surface 22R/04L and Grass surface 222L/04R).
LHD Pad	11SMS 56346 84646	33° 18'00"/117° 28'09"	820 ft x 125 ft AM-2 matting marked to simulate LHD.
LZ Viewpoint	11SMS 54447 86811	33° 18'00"/117° 28'08"	300 X 130 ft concrete pad with two landing spots located on Gold Beach.
LZ-53	11SMS 55603 93757	33° 22'55"/117° 28'38"	53 Area parade deck.

Site	Location		Remarks
VTOL 101	11SMS 56064 85508	33° 18'28"/117° 28'51"	3000 X 50 ft concrete runway. Part of active roadway (old Highway 101). Requires road guards and coordination 60 working days prior to event.
VTOL Pad 1	11SMS 57548 83035	33° 17'08"/117° 27'13"	800 X 100 ft AM-2 matting runway Heading 09/27. 100 ft x 100 ft landing pad. Within close proximity to CAL Site 21.
VTOL Pad 2	11SMS 60078 82014	33° 16'35"/117° 25'08"	140 X 140 ft concrete pad. Variable intensity pilot controlled lighting (VHF 126.2).

7. DROP ZONES

Site	Location (Center Point)		Remarks
DZ Basilone	11SMS 66390 87508	33° 19'34"/117° 21'40"	1110m X 921m.
DZ Case Springs	11SMT 61864 00544	33° 26'37"/117° 24'37"	500m X 500m. (Inactive).
DZ Deluz	11SMS 72026 96001	33° 24'10"/117° 18'02"	Circular DZ 250m radius.
DZ Fallbrook	11SMS 74765 86659	33° 19'07"/117° 16'16"	600m X 400m. (Inactive).
DZ Horno	11SMS 57671 91438	33° 21'41"/117° 27'18"	800m X 100m. (Inactive).
DZ Ocean	11SMS 55314 83458	33° 17'21"/117° 28'47"	Water DZ 3000m X 1200m.
DZ Papa 3	11SMS 59404 90660	33° 21'15"/117° 26'10"	Circular DZ 375m radius.
DZ R409A	11SMS 67532 94066	33° 23'07"/117° 20'56"	1106m X 829m.
DZ Six Three	11SMS 46952 99248	33° 25'52"/117° 34'14"	Circular DZ 200m radius. (Inactive).
DZ Tank Park	11SMS 60001 83003	33° 17'07"/117° 25'46"	Circular DZ 350m radius.
DZ Wild Eagle	11SMS 65222 90626	33° 21'15"/117° 22'26"	1100m X 800m. (Inactive).