BY ORDER OF THE COMMANDER
307TH BOMB WING

307TH BOMB WING INSTRUCTION
13-212

19 SEPTEMBER 2024

Nuclear, Space, Missile, Command and Control Operations

RANGE PLANNING AND OPERATIONS

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This 307th Bomb Wing (307 BW) Instruction implements Air Force Manual 13-212, Volume 1, *Range Planning and Operations,* dated 13 March 2023. It provides guidance for the planning, operations, management, safety and use of the Claiborne Bombing, Gunnery, and Electronic Warfare Range (Claiborne Range). It applies to members of the 307th Bomb Wing, as well as aircrew and ground personnel using the range or associated airspace. Ensure that all records created as a result of any processes prescribed in this publication are maintained in accordance with (IAW) Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and dispose of them IAW Air Force Records Disposition Schedule (RDS) located in Air Force Records Management System. Contact supporting records managers, as required. Waiver authority is delegated to the Range Operating Authority (ROA). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route through channels to the 307 OSS/OSOR, 1333 Twining Drive, Barksdale AFB, Louisiana 71110.

SUMMARY OF CHANGES

This document has been revised and must be reviewed thoroughly. This instruction has been restructured to align with AFMAN 13-212, Volume 1. In addition, this instruction implements

changes to range scheduling and electronic warfare operations; mandates the use of the Center Scheduling Enterprise (CSE-AF); provides updated range planning guidance; identifies the range-supported events and assigned users. **Finally, Weapon events and employment parameters for several aircraft have been modified or weapon events have been added.**

Chapter 1

INTRODUCTION AND RESPONSIBILITIES

1.1. General Information. Claiborne Range is an Air Force Reserve Command (AFRC) contracted site operated by the 307 BW. Claiborne Range is available for use by all United States (U.S.) military services and units, including those participating in Green Flag Exercises and Joint Readiness Training Center (JRTC) out-of-sector rotations. The range is in the Kisatchie National Forest approximately 11 miles southwest of Alexandria International Airport (AEX) and within the confines of Restricted Area 3801 (R3801). Range terrain consists of small rolling hills, small creeks, and pine forest. The endangered Red-Cockaded Woodpecker nests in the pine trees and the threatened Louisiana Pearlshell Mussels inhabit several creeks located within the range boundary. **Any direct and intentional disturbance of the marked nesting areas or the creek beds is strictly prohibited.** The range consists of an air-to-ground training site capable of electronic scoring of inert weapon impacts, laser training area, gunnery range, and several threat emitter systems. The Electronic Warfare (EW) program provides realistic Surface-to-Air threats, feedback, and aircrew debriefing capabilities. A government contractor is responsible for all operations, maintenance, and services required by their contract terms. Operational control, technical direction, and logistics support are provided by 307 BW and administered by the 307th Operations Support Squadron (307 OSS). There is an on-site Range Operations Officer, an Airspace and Range Manager, & Scheduling Representative assigned to 307 OSS and they are designated as 307 OSS/OSOR.

1.2. The 307 BW - Range Operating Authority (ROA). The 307th Bomb Wing Commander, Barksdale Air Force Base, Louisiana is the Range Operating Authority (ROA) for Claiborne Range. Responsibilities for range operations have been delegated to the 307th Airspace and Range Manager, the 307 Operations Group Commander, and the 307th Operations Support Squadron Commander. The designated ROAs are responsible for all Claiborne Range activities, as well as scheduling: Restricted Area R-3801 A/B/C; Claiborne Military Operating Area (MOA); ground activities and/or electronic warfare training.

1.3. Range Operations Officer (ROO). The ROO is responsible for the overall supervision of all range operations; the efficient utilization of range assets; the safe and effective completion of training missions; and the general oversight of all improvement projects. The ROO maintains authority in representing the ROA over all range operations and support functions throughout the planning, scheduling, and completion stages of operations, maintenance, improvement projects, and training missions.

1.4. Range Control Officer (RCO). The RCO is primarily responsible for the overall supervision of all air-to-ground range operations and the general safety of all personnel and range assets during air-to-ground operations.

1.5. Range Users.

1.5.1. Primary range user is the 93rd Bomb Squadron (B-52 Formal Training Unit (FTU)) assigned to 307 BW (Barksdale AFB, LA). The 307 BW conducts Unit Training Assemblies (UTAs) two weekends a month and will be given priority for Electronic Countermeasures (ECM) training.

1.5.2. Other users are identified in AFMAN 13-212, Vol 1, Attachment 4, Claiborne Assigned Users and Training Events.

1.5.3. Commanders are responsible for ensuring that all personnel within their jurisdiction are familiar and comply with the provisions of this instruction when operating aircraft in range airspace or performing ground operations and/or duties on Claiborne Range. All personnel using Claiborne Range Complex and assigned airspace must be familiar with procedures and restrictions listed in this instruction and associated Letters of Agreements (LOA). Current versions of LOAs at the time of publishing are included in this instruction in **Attachment 5**. Updated LOA versions will be posted in Center Scheduling Enterprise (CSE-AF) and on the Claiborne Range SharePoint. **https://usaf.dps.mil/sites/307BW/307OG/OSS/Caliborne%20Range/SitePages/Home.aspx**

1.6. Unit Feedback.

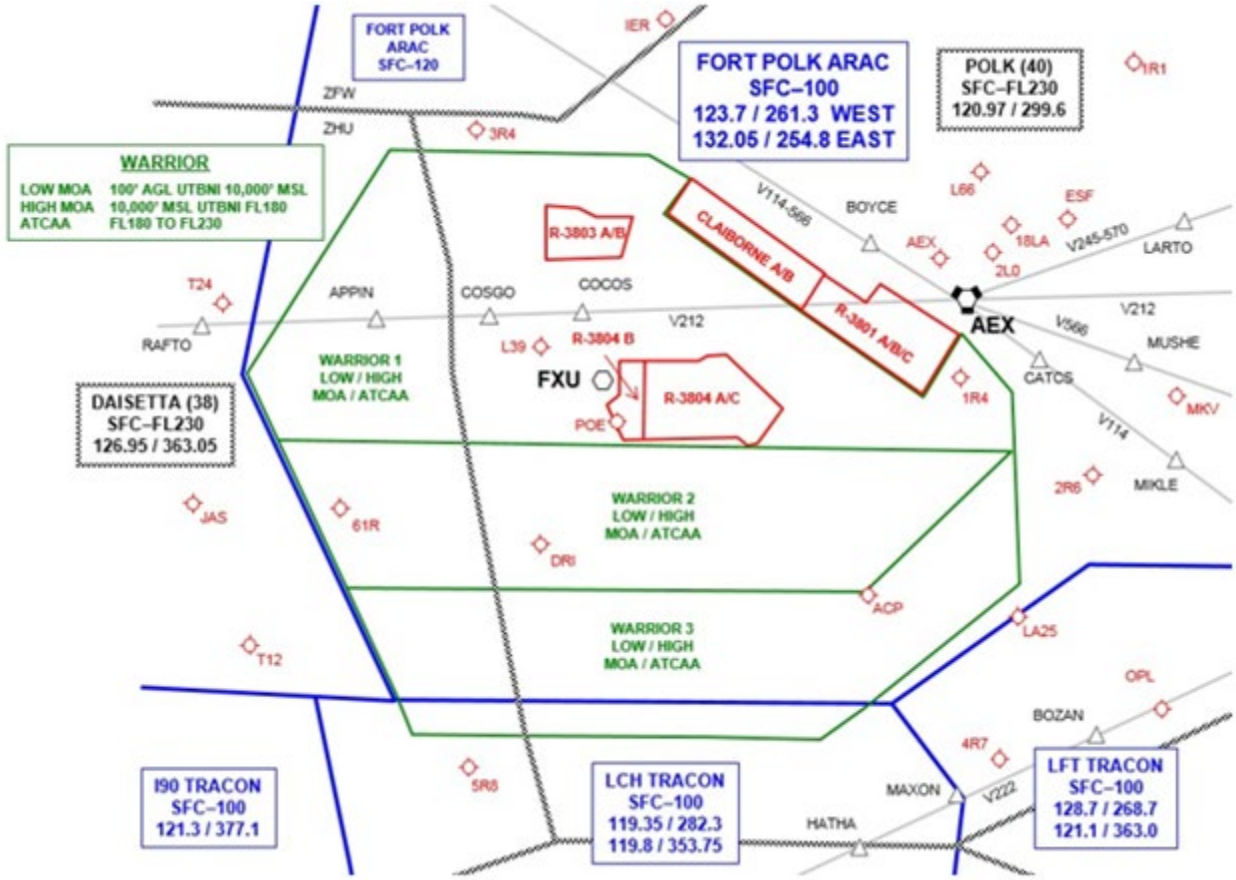
1.6.1. Contact the 307 OSS/OSOR Airspace and Range Management office to provide information that is deemed as necessary feedback, DSN: 331-3160/3171 or (318)529-3160/3171.

Chapter 2

CLAIBORNE RANGE, LOUISIANA

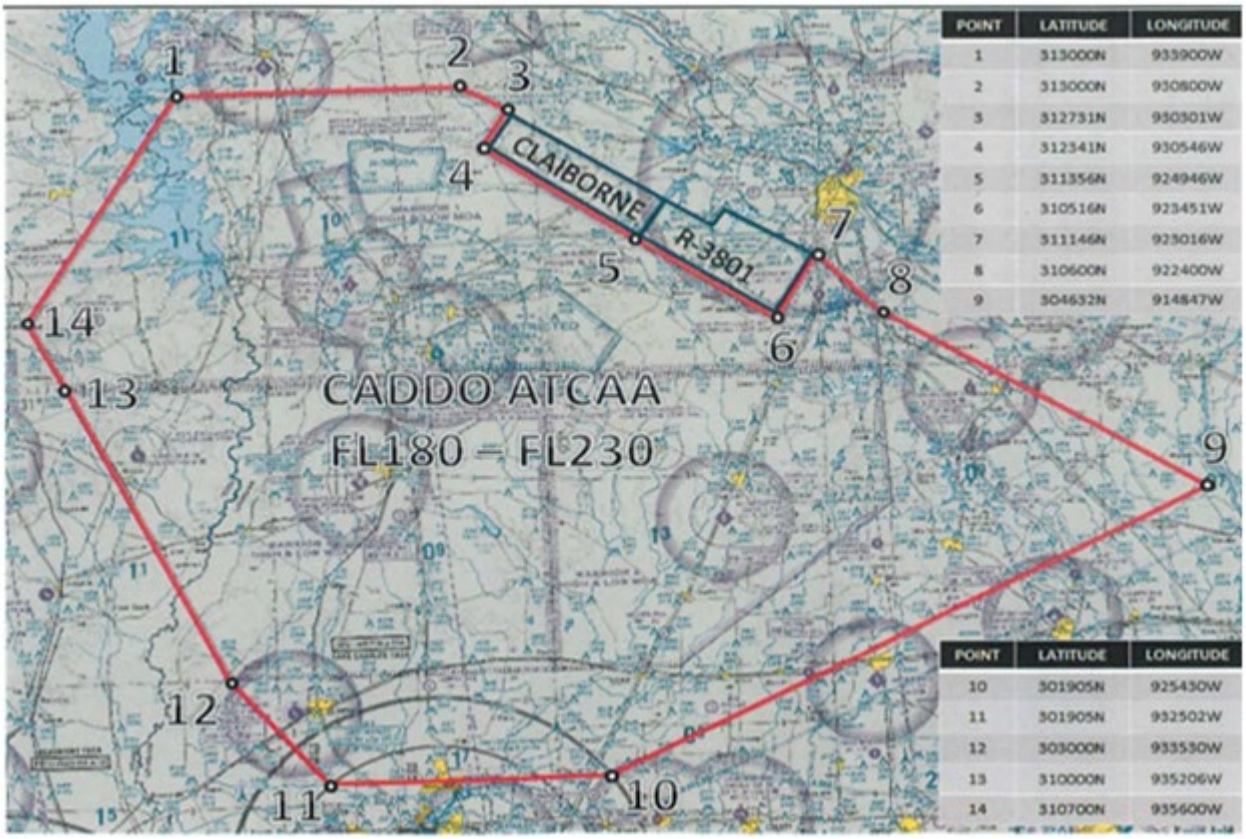
2.1. Area Overview: The Airspace depicted below shows the continuous airspace for MOA operations in and near Claiborne Range except for the Caddo Air Traffic Control Assigned Airspace (ATCAA). Claiborne Range is located within the confines of R-3801 depicted on the Northeast side of the Airspace Diagram below.

Figure 2.1. Area Overview.



2.1.1. The Caddo ATCAA includes all the Warrior 1, 2 & 3 ATCAAs and also extends further to the South and Southeast. The Caddo ATCAA and any (or all) Warrior ATCAA(s) cannot be scheduled at the same time.

Figure 2.2. Caddo Airspace with coordinates in Degrees Minutes Seconds (DDD MM SS) format:



POINT	LATITUDE	LONGITUDE
1	313000N	933900W
2	313000N	930800W
3	312731N	930301W
4	312341N	930546W
5	311356N	924946W
6	310516N	923451W
7	311146N	923016W
8	310600N	922400W
9	304632N	914847W

POINT	LATITUDE	LONGITUDE
10	301905N	925430W
11	301905N	932502W
12	303000N	933530W
13	310000N	935206W
14	310700N	935600W

Figure 2.3. Warrior Airspace with coordinates in DDD MM SS format:

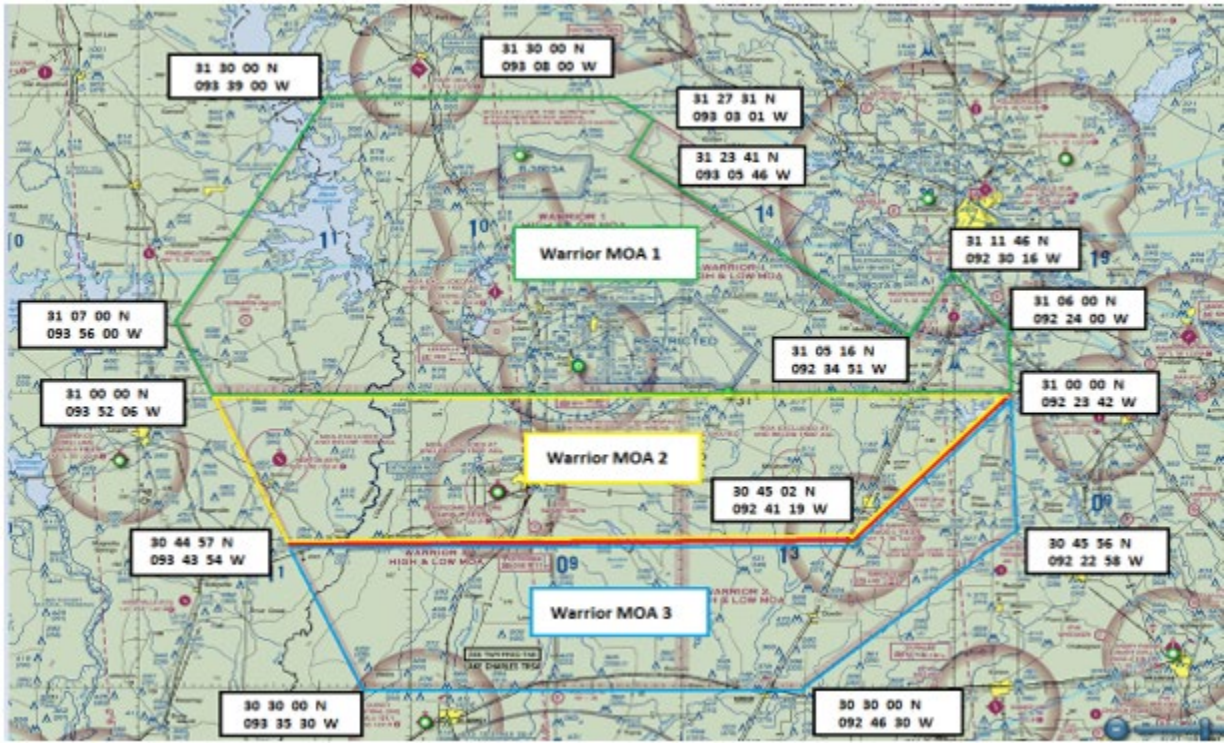


Figure 2.4. Claiborne Airspace with coordinates in DDD MM SS format:

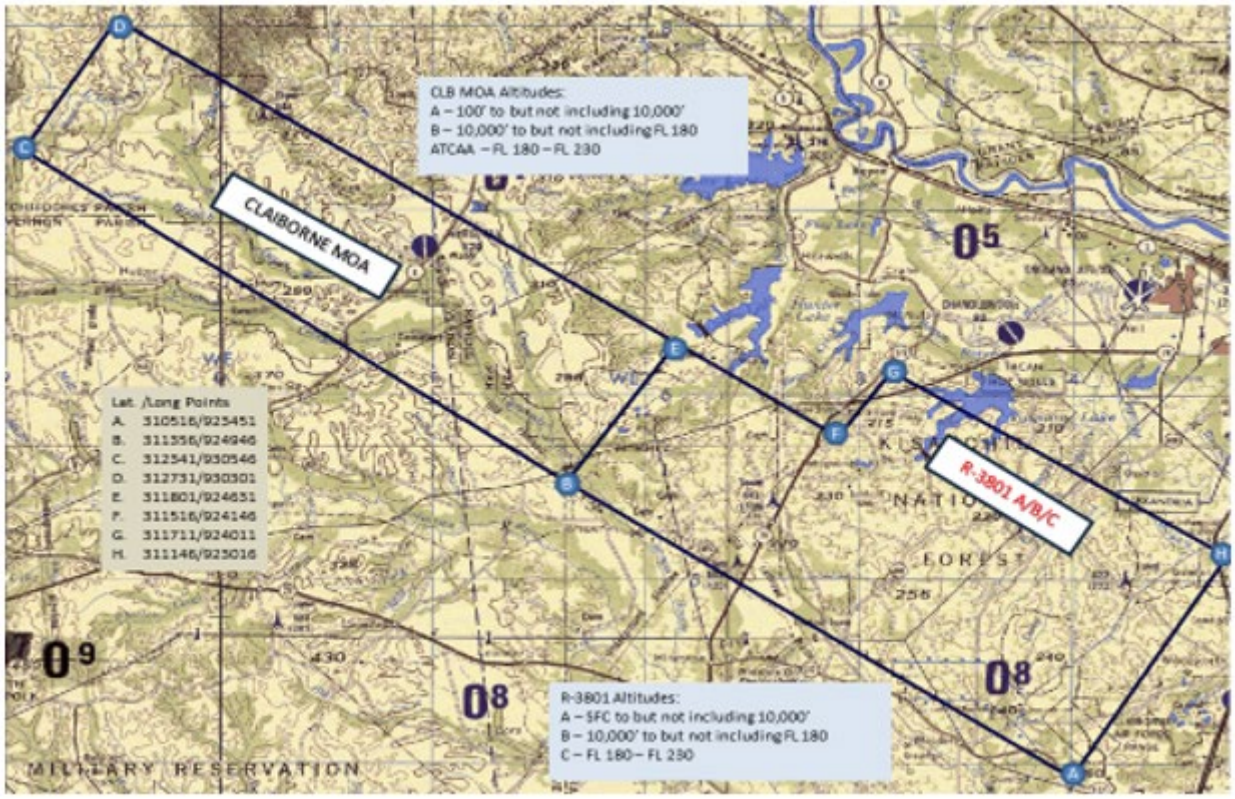
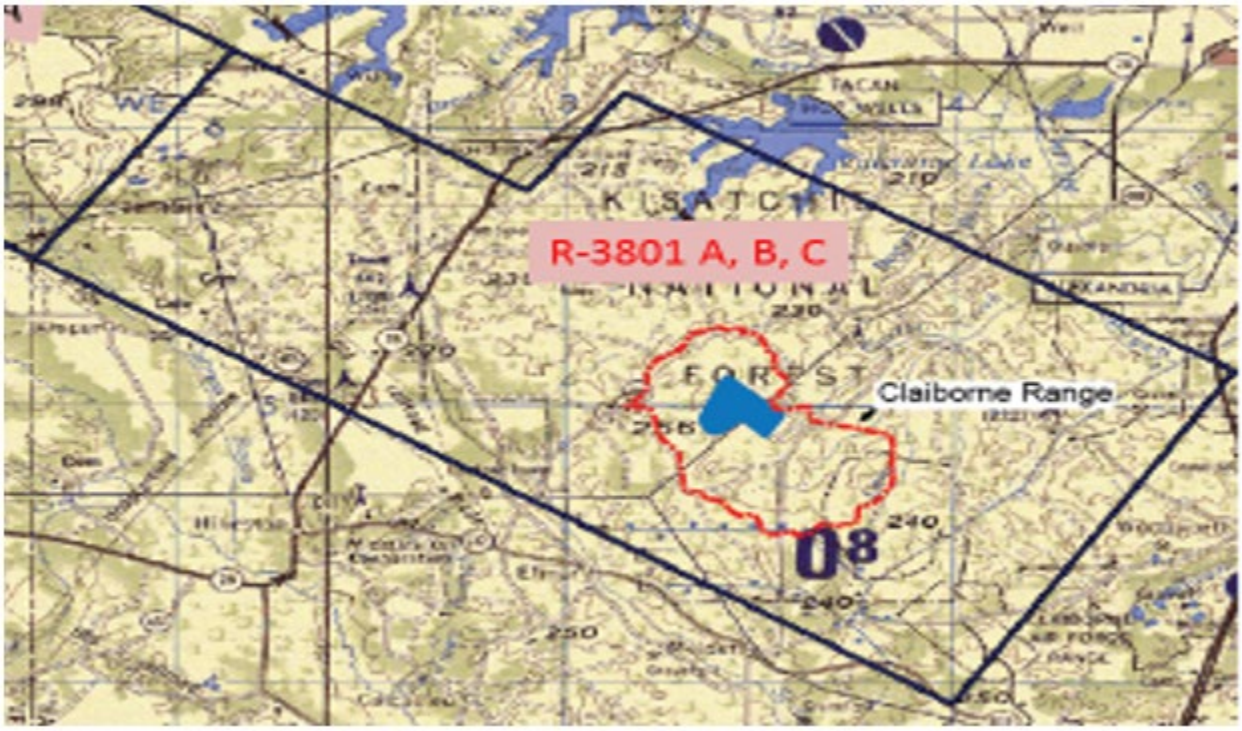
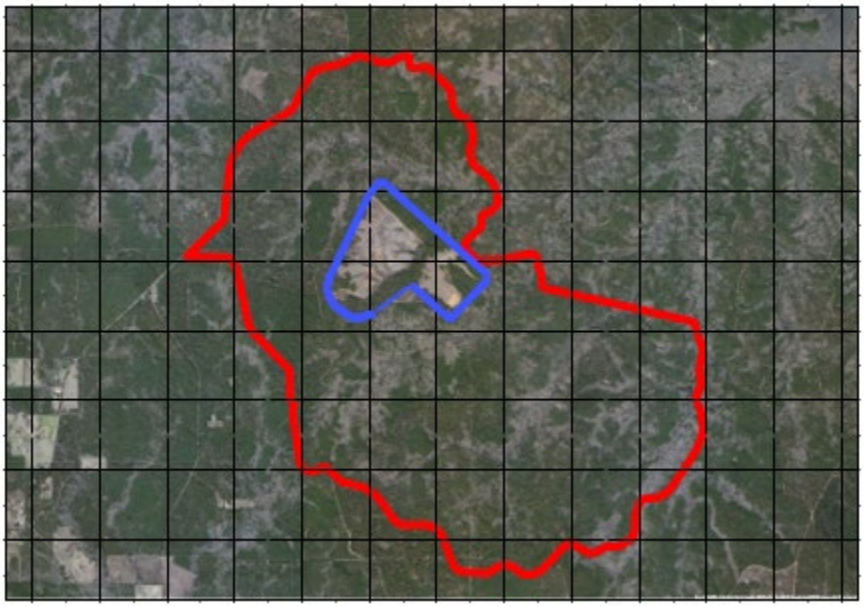


Figure 2.5. Claiborne Range Boundary and Impact Area inside R-3801:



2.2. Range Description. Claiborne is an inert weapons only range. The complex consists of an air-to-ground Bombing and Gunnery range and EW facilities. The range lies within the confines of a U.S. National Forest, so Claiborne Range has established a flexible range boundary system identified as either the **Expanded Boundary** or **Restricted Boundary**. The range comprises of two concentric, fenced-in areas; the Expanded Boundary Area and the Impact Area (Restricted Boundary). The Expanded Boundary Area consists of 7128 acres of forested land surrounding the Impact Area. The Impact area consists of multiple target arrays situated on 672 cleared acres.

Figure 2.6. Range Boundaries (Expanded Boundary in red; Impact Area (Restricted Boundary) in blue).



2.2.1. These boundaries only affect the type of actual air-to-ground training that can be conducted. Simulated training is unaffected. Schedules for when the range is open for Public Access (Restricted Boundary) are posted in CSE-AF and on the Claiborne Range SharePoint. The RCO may further restrict events when personnel are working in the adjacent areas or when a portion of the range boundary has been released to the United States Forestry Service (USFS) for short notice operations.

2.3. Capabilities. Claiborne is a day/night range supporting aircrew training in laser operations, the application of electronic warfare countermeasures, and in the delivery of inert munitions, chaff, or flares. For laser operations, the range has a Laser Evaluator System- Mobile (LES-M), Special Operations Forces Laser Acquisition Marker (SOFLAMs) and an Infrared Zoom Laser Illuminator Designator (IZLID) Infrared (IR) pointer. For Electronic Warfare, three electronic threat simulators are at the range: one Joint Threat Emitter (JTE) system with two Threat Emitter Units (TEU) and one Tactical Radar Threat Generator (TRTG). Existing target arrays are designed for lasers, practice bombs, rockets, and 20/25/30mm bullets. Target arrays consists of conventional, tactical, and strafe targets. The range is equipped to score specific bomb, strafe, and laser targets. Claiborne range can provide Class A and Class B services, as defined in AFMAN 13-212, Vol 1. All actual air-to-ground training, including dry run-in events prior to an inert release, will be considered Class A services and will therefore require an RCO.

2.3.1. The range is also able to support limited training missions for small ground units. Depending on weather conditions, pyrotechnics may be pre-coordinated for battlefield effects. All functions are available to all DoD aircraft and ground units. Service classification for all other training will be determined by the ROO based upon mission requirements. Detailed information for range capabilities are in **Chapter 6**.

2.4. Hours of Operation. Normal hours of operations are Monday through Thursday, 0900 - 2100L, and Friday, 0900 - 1500L (Central Standard Time (CST)). Additional Operating Hours (AOH) may be available to support training beyond the normal range hours depending on mission

requirements and asset availability. AOH may be scheduled in one-hour increments to extend existing training time; otherwise, AOH must be scheduled in a four-hour block in order to allow for opening and closing time. All mission requests are evaluated on a case-by-case basis.

Chapter 3

RANGE SCHEDULING PROCEDURES

3.1. Scheduling Authority.

3.1.1. The 307 OSS/OSOR schedules the Claiborne MOA, R3801 Airspace and Claiborne Range activities. The US Army at Fort Polk, LA owns and operates the Warrior MOA and Caddo ATCAA Airspace and is the sole scheduling authority for those areas. To schedule the Fort Polk controlled airspaces contact the Air Traffic and Airspace Officer at DSN 863-1151/7982 or COMM 337 531-1151/7982, or the Army Radar Approach Control (ARAC) at 337-531-2352.

3.1.2. The 307th Operations Support Squadron, Airspace and Range Management Office (307 OSS/OSOR) is responsible for scheduling all Claiborne Range training activities; including lasers, EW threat systems, air-to-ground, and small ground units.

3.1.3. All requests for airspace, range time, and/or Claiborne Range training activities should be submitted through the Center Scheduling Enterprise (CSE-AF) Barksdale, Claiborne Range Homepage NLT 1500 CST the Thursday prior to the week requested.

3.1.4. Same day short notice requests must be submitted in CSE-AF at least three (3) hours prior to the mission followed by a phone call to the 307 OSS/OSOR scheduling office. For units that want to conduct air-to-ground activity, contact 307 OSS/OSOR first to see if we can accommodate request. RCO manning availability will determine if we can accept or decline request.

3.1.5. Combat Lasers Ops: Notify the 307 OSS/OSOR of all missions requiring the use of combat lasers no later than 1 hour prior to the start of range activity. Failure to do so may result in denial of combat laser activity. The RCO has final authority for combat laser use.

3.1.6. Units will notify the 307 OSS/OSOR ASAP when schedule changes occur.

3.1.7. For users that don't have a CSE-AF account; establish a Barksdale CSE-AF account by logging onto the following web site, **https://cseaf.eglin.af.mil/CSE/home.aspx**. For CSE-AF support, **CSEAFHelp@eglin.af.mil** or CSE-AF Help Desk DSN: 872-4491or (Comm) 850-882-4491, Option 7. The Barksdale, Claiborne Range CSE-AF representatives are the 307th OSS/OSOR at DSN: 331-3171 or COMM 318-529-3171. **Note: When creating your account for the first time it is recommended that under "Site" you put Barksdale. This will allow our local representatives to assist you with navigating through the CSE-AF program.**

3.2. Contact Information.

3.2.1. 307 OSS/OSOR – Airspace and Range Scheduling

Phone: (DSN) 331-3171, (Comm) 318-529-3171
Fax: (DSN) 331-3372, (Comm) 318-529-3372
Address: 1333 Twining Drive, Barksdale AFB, LA, 71110

3.2.2. Claiborne Bombing & EW Range – Range Operations Officer (ROO)

Phone: (DSN) 331-3172, (Comm) 318-529-3172

Address: 778 Forest Service Road 240, Elmer, LA 71424

3.2.3. Claiborne Bombing & EW Range – RCO & EW Director

Phone: (Comm) 318-487-0378
Fax: (Comm) 318-487-0577
Address: 778 Forest Service Road 240, Elmer, LA 71424

Chapter 4

AIRSPACE

4.1. Special Use Airspace.

4.1.1. 307th BW assigned airspace:

4.1.1.1. R3801 A/B/C – Restricted airspace from surface to Flight Level (FL) 230 (See **Figure A2.3**., *R-3801 A/B/C*).

4.1.1.2. Claiborne MOA A/B/ATCAA – military operations airspace northwest of R-3801 from 100 AGL to FL 230 (See **Figure A2.4**., *Claiborne MOA*).

4.1.1.3. The Claiborne MOA/ATCAA and/or R-3801 airspace can be scheduled independently of Claiborne Range. This usually occurs when an aircraft wants to fly through the airspace without using Claiborne Range assets.

4.1.2. Fort Polk assigned airspace:

4.1.2.1. Warrior MOA – training airspace adjacent to the Claiborne MOA and R-3801 from 100' AGL to 17,999' MSL. (See **Figure A2.5**., *Caddo ATCAA*).

4.1.2.2. Warrior or Caddo ATCAA - training airspace adjacent to the Claiborne MOA and R-3801 from FL180 to FL230.

4.1.2.3. R3803A/B/C/D/E/F and R3804A/B/C – Restricted airspace within the confines of the Warrior MOAs. Aircrew need to check to see if the airspace is active. Airspace is from surface to FL350 or 34,999' MSL.

4.2. Airspace for MDS Specific Training. Units requesting ECM training must schedule specific airspace appropriate with mission activities. Examples:

4.2.1. AWACs may schedule ECM training, but not R-3801C or Claiborne ATCAA.

4.2.2. B-52s/B-1s may schedule ECM training, as well as R-3801C and Claiborne ATCAA, or Caddo ATCAA.

4.2.3. C-130s and Fighters may schedule ECM training, as well as R-3801A/B/C and Claiborne A/B/ATCAA MOA.

4.2.4. Helicopters may schedule ECM training, as well as R-3801A and Claiborne A MOA.

4.3. Polk Approach Airspace (Fort Polk, LA). Caddo ATCAA and/or Warrior Complex must be scheduled through Polk Approach at DSN 863-1151/7982, (Comm) 337-531-1151/7982.

4.4. Airspace Activation.

4.4.1. Medevac flights have priority over all other activities.

4.4.2. If a flight is on time, as scheduled, no action is required.

4.4.3. If a flight expects it will not meet the scheduled range time within 30 minutes (early or late), coordination should be made with 307 OSS/OSOR so that the airspace can be adjusted through the RCO, Polk Approach, and the FAA. Failure to do so may result in unnecessary delays or denial of the airspace.

4.5. Entry Procedures.

4.5.1. Contact Polk Approach 10 minutes prior to entering R-3801. Early coordination with Polk Approach or the RCO will expedite range entry.

4.5.2. Once cleared to use frequency by Polk Approach, monitor Claiborne Range frequency.

4.5.3. Obtain clearance from the RCO before entering the R-3801 airspace.

4.5.4. Upon initial contact give the RCO expected events, gun numbers, aircraft tail numbers, and laser requests. The RCO will pass the range altimeter, Alexandria Airport active runway, and other remarks, as needed. At RCO discretion aircraft may be directed to hold at PITS.

4.5.5. Coordinate holding altitudes with the RCO.

4.5.6. Aircraft should expect to remain on ATC assigned Mode 3 squawk.

4.5.7. Aircraft may request holding overhead of range while other flights employ ordnance.

4.5.8. PITS Holding Area.

4.5.8.1. PITS is defined as AEX 268/015 and is located at N31-15.579 W092-48.053.

4.5.8.2. PITS will not be used when radar-bombing events are being conducted.

4.5.9. Bombers: R-3801, Claiborne MOA, Caddo ATCAA and/or Warrior 1 MOA should be scheduled for deconfliction of non-participating aircraft.

4.6. Exit Procedures.

4.6.1. Exit as directed by the RCO and/or Polk Approach.

4.6.2. Notify Polk Approach of intent to depart the airspace.

Chapter 5

COMMUNICATIONS

5.1. Frequencies.

5.1.1. Claiborne Range is equipped with UHF, VHF, and FM radio capability. All radios can simulcast except FM.

5.1.2. RCO UHF: primary 298.6, secondary 268.1 (Guard 243.0 is monitored).

5.1.3. RCO FM: 34.20

5.1.4. RCO VHF: primary 140.4, secondary 148.8875

5.1.5. ECM frequencies: primary 298.6, secondary 268.1

5.2. Radio Procedures. All Claiborne Range radio procedures are IAW AFI 11-214, *Air Operations Rules and Procedures*.

5.3. Radio Failure. In the event of communications difficulty, flights will attempt to establish radio contact with the RCO on the UHF, VHF, or FM frequencies.

5.3.1. Aircraft with radio failure and no other difficulty will proceed as follows:

5.3.1.1. Aircraft with radio failure and no other difficulties will fly past the main range tower, rocking wings, break in the direction of traffic, climb and orbit at least 1,000’ above the highest pattern yet to be flown.

5.3.1.2. If an escort is required and/or experiencing additional difficulties, the pilot will fly by the tower and break in the opposite direction of traffic, time and conditions permitting.

5.3.1.3. The RCO will notify the flight lead to maintain surveillance of signaling aircraft and restrict the range as necessary.

5.3.2. If complete communications failure occurs on the range, the flight will hold high and dry. If contact with the RCO cannot be re-established, the flight will depart the range and attempt to contact Polk Approach.

5.4. Noise Complaints.

5.4.1. The ROO will document all noise complaints and forward the report to the 307 OSS Commander, Airspace & Range Office and 307 BW Public Affairs (PA).

5.4.2. Immediate Actions: Annotate location, date and time, contact number, type, color of aircraft, and any other amplifying data that would help in the investigation. Reassure the complainant that their concerns will be investigated, and PA will contact them. There will be no indication that damages will be paid by the Air Force, accept blame, nor assure complainant that the event will not happen again.

5.4.3. The 307 OSS/OSOR will coordinate with the appropriate FAA sector and file requested FAA reports.

Chapter 6

OPERATIONS

6.1. Electronic Threat Simulators.

6.1.1. Aircrews may submit requests for pre-planned scenarios, individual threat systems, or individual threat signals within CSE-AF or make the requests during flight. In order to prevent unnecessary delays aircrew should schedule the threat system they would like to work with in CSE-AF, so it is immediately available after initial contact.

6.1.2. The current inventory includes a JTE with two TEUs, and one TRTG. (See **Attachment 3**, **Table A3.1**., Simulated Threat Systems.)

6.1.3. The EW Technician, callsign "Medicine Man," will be available on primary or secondary ECM frequencies, 298.6 and 268.1 for communications regarding EW training.

6.2. Targets. Claiborne Range is **INERT ONLY**. High explosive (HE) ordnance is not authorized for any target. All targets are defined as Inert-Authorized and/or Dry-Only and may consist of more than one Desired Point of Impact (DPI). Attachment 7 shows authorized inert weapons and delivery parameters for aircraft type on Claiborne Range.

6.2.1. **Inert-Authorized Targets.** Scoring is available for all inert-authorized targets except for the Multi-Strafe Target. (See **Attachment 6**, **Table A6.1**., Inert-Authorized Target Coordinates.)

6.2.1.1. Conventional Bomb Circle. This target is a single large vehicle target located in the center of the Impact Area and ringed by white-painted tires set at 23 and 45 meters. This target is approved for dry passes or inert practice bombs.

6.2.1.2. Center TAC. This target consists of an array of three vehicles located approximately 175 meters north of the Conventional Bomb Circle. The DPIs are aligned north to south in a linear pattern. Unless otherwise directed, the middle DPI will be the scored target. This target is approved for dry passes or inert practice bombs.

6.2.1.3. East TAC. This target is a single vehicle located approximately 250 meters east of the Conventional Bomb Circle. This target is approved for dry passes or inert practice bombs.

6.2.1.4. West TAC. This target is a single vehicle located approximately 200 meters west of the Conventional Bomb Circle. This target is approved for dry passes or inert practice bombs.

6.2.1.5. Rocket Circle. This target is a single large vehicle target located approximately 240 meters southwest of the Conventional Bomb Circle. This target is approved for dry passes or inert practice bombs, 2.75-inch rockets, and 20/25/33-mm Target Practice (TP) rounds.

6.2.1.6. South TAC. This target consists of two stacked shipping containers located 275 meters southwest of the Rocket Circle. This target is approved for dry passes or inert heavyweight bombs only. Note: South TAC may be mistaken as part of Night TAC.

6.2.1.7. Night TAC. This target consists of an array of three vehicles located 200 meters south of the Rocket Circle. The three DPIs are arranged in a triangle pattern. This target array is approved for dry passes or inert heavyweight bombs, inert practice bombs, 2.75-inch rockets, and 20/25/33-mm TP rounds. Note: A “friendly” position is simulated by a vehicle set 65 meters to the south-west of the southern-most DPI. Multi-target strafe runs are approved for this target.

6.2.1.8. Multi-Strafe Target. This target consists of an array of three vehicles arranged in a linear pattern located approximately 425 meters west of the Rocket Circle. The DPIs are separated by approximately 40 and 65 meters. This target array is approved for 20/25/30-mm TP rounds only. Multi-target strafe runs are approved for this target.

6.2.1.8.1. Multi-Target Strafe Runs. Multi-Target High Angle Strafe (HAS) runs are authorized on all the DPIs of the Night TAC and the Multi-Strafe Targets. These targets may be combined for a total of six (6) possible DPIs; however, during any single pass no more than four (4) of the six (6) available targets is authorized on a 125 heading only. Advise the RCO when intending to do a multi-target strafe run.

6.2.1.9. Strafe Pits. This target consists of an array of four (4) DPIs located approximately 1200 meters south-east of the Conventional Bomb Circle.

6.2.1.9.1. The targets are constructed from salvaged drag chutes suspended between two (2) telephone poles 30 meters apart. The targets are arranged in a linear pattern situated south-west to north-east and approximately 45 meters from center to center.

6.2.1.9.2. The targets are numbered 1 through 4 beginning at the northern-most target. Target 4 is the only target approved for high-angle attacks. These targets are approved for 20/25/30-mm TP rounds only.

6.2.1.9.3. Two-Target Strafes are approved only for the following patterns: first attack on target 1 then move to target 2, or first attack on target 2 then move to target 3.

6.2.1.9.4. Strafe Pits Foul Line. A foul line consisting of white-painted dumpsters is located 2,000' (610 meters) from the strafe targets. The foul line is positioned adjacent to the Main Tower and perpendicular to the 125° run-in heading. Additional distance markers include a simulated runway at 5,000' and two lines of white-painted vehicles at 4,000’ and 3,000'. All aircraft are required to cease fire prior to the 2,000' foul line.

6.2.1.9.5. All run-ins on the Strafe Pits will be accomplished using a left pattern only.

6.2.2. **Dry-Only Targets.** All targets not specifically designated and described in **paragraph 6.2.1**. or **Attachment 6** shall be considered dry-only and may only be used for simulated attacks. Dry-Only Target Coordinates are given in **Table A6.2**., Dry-Only Target Coordinates

6.2.2.1. Urban Village. The Urban Village is square complex surrounded by a large wall. The only opening to the complex is in the center of the north-east wall. There is a tower located in the center of the complex. All the buildings and walls are constructed with shipping containers painted to look like adobe structures. Two M-6 Tanks are located near this area.

6.2.2.2. Airfield. The simulated airfield is located north-west of the Urban Village. The airfield complex consists of an airstrip with an F-4 on it, control tower, aircraft hangar, two defense revetments, and numerous vehicles. The buildings are constructed with shipping

containers. Anything around/near the simulated runway environment is cleared for laser operations.

6.2.2.3. SA-6. The SA-6 is located south-west of the airfield, almost one mile directly off the end of the airstrip.

6.2.2.4. Armored Personnel Carrier (APC). The APC is adjacent to the SA-6. It is situated in the tree line for camouflage.

6.2.2.5. Heated Tank. A heated tank is available to provide IR familiarization training.

6.3. Weapons Release Delivery.

6.3.1. Aircrew will follow the procedures in AFI 11-214. All flying users must perform a dry/familiarization pass before weapons delivery (day or night) for any of these conditions: no specific AFI 11-2MDSV3 operating procedures; any member of the aircrew/aircraft operator's initial use of the range or if any member of the aircrew/operator has not performed a weapons delivery at the range within one year.

6.3.2. Ordnance delivery is authorized only during Class A operations.

6.3.3. The RCO governs weapons release authority when the range is scheduled for Class A operations. The RCO may delegate this authority to a JTAC/FAC(A), or flight lead. This authority may NOT be delegated to the EW ground mission director.

6.3.4. Simulated attacks can occur when Claiborne MOA and/or R3801are scheduled, and Claiborne Range is closed or not scheduled. Simulated attack clearance authority (i.e., "Continue Dry") can occur at the direction of the Flight Lead, FAC(A), or JTAC. All aircraft will perform a dry pickle/trigger check IAW aircraft flight manuals prior to any simulated attacks.

6.3.5. If weather prohibits actual weapons delivery, the flight may request authorization from the RCO to conduct other training within the confines of R3801 and Claiborne MOA.

6.3.6. If the weather is below AFI 11-214, *Air Operations Rules and Procedures*, Visual Meteorological Conditions (VMC) weapons delivery minimums, aircrew must use all available sensors to clear their flight path utilizing see and avoid procedures. The impact area will close.

6.4. Self-derived Coordinates (Targeting Pod (TGP), JTAC, etc,).

6.4.1. Aircrews and JTACS may self-derive coordinates for actual or simulated bomb releases.

6.4.2. Coordinates must be within .020 min Lat/Long (approximately 120 feet) of actual range coordinates.

6.4.3. All TGP self-derived target coordinates require a system read back to the RCO after being either fully transferred to the "smart" weapon or for "non-smart" weapons after the target has been updated with new coordinates.

6.4.4. JTACs will pass coordinates to RCO for approval before relaying to aircrew.

6.5. Fouls, Unsafe Actions, and Abort Criteria.

6.5.1. Pilots will immediately acknowledge the RCO's assessment of fouls or unsafe action.

6.5.2. RCO's assessments of two (2) fouls will result in ceased employment and/or departure.

6.5.3. Abort Criteria:

6.5.3.1. Pilots will not over fly or point the aircraft at any manned locations (towers, ops building or JTE sites. These locations are depicted in **attachment 6**.

6.5.3.2. Off target maneuvering or turnouts between the main and flank towers is not authorized.

6.5.3.3. For aircraft operating below 6000'MSL: Do not over fly Forest Service office located at 15R WQ 309 498 / N3112.615 W09238.837.

6.6. Attack Restrictions.

6.6.1. Claiborne Range operates under Expanded Boundary operations during most of the year. Occasionally, it must operate under Restricted Boundary operations. Which Boundary condition is being used on a given day is provided to range users in CSE-AF or on the Claiborne Range SharePoint. In CSE-AF, open the document labeled Safety Schedule. The dates listed on this one-page document are the dates the range will conduct Restricted Boundary operations. During Restricted Boundary operations air-to-ground training capabilities with inert weapons decreases significantly. Simulated weapon deliveries are not affected by the boundary condition. Approved inert munitions delivery events for each boundary condition are listed in **Attachment 7**.

6.6.2. The 307 OSS/OSOR ensures that all approved events are based upon weapons' effects containment requirements prescribed in the most up-to-date version of Weapons Danger Zone (WDZ) Tool. Range users may make requests for inert weapon events not currently listed in Attachment **7** to **307** OSS/OSOR. Contact information is listed in 1.6. Expect up to two weeks to have event looked at and approved/disapproved as applicable. Approved Events will be posted on SharePoint site. See 1.5.3.

6.7. General Restrictions.

6.7.1. First Run Attack bomb impact times will be planned no earlier than range time plus two minutes.

6.7.2. Strafing.

6.7.2.1. Left patterns will be used with 125-degree heading (See **Figure A2.6**. Standard Run-In Headings).

6.7.2.2. Right patterns will be used with 310-degree heading (See **Figure A2.6**.).

6.7.2.3. Rockets and Strafing. Aircraft nose must be above the horizon before any turns using a left pattern on a 125-degree heading (See **Figure A2.6**.).

6.7.3. Conventional Deliveries

6.7.3.1. Primary heading is 125 magnetic (See **Figure A2.6**.).

6.7.3.2. Left patterns are standard.

6.7.3.3. Exception: Fighters may use left or right patterns.

6.7.3.4. Pop patterns authorized.

6.7.3.5. Exception: Bombers will use right patterns

6.7.3.6. Bombers must have a good bombing system (Inertial Navigation System (INS) or Global Positioning System (GPS)/Alter) with two aim points acquired prior to weapons release.

6.7.4. If the RCO cannot visually acquire the aircraft, the RCO will advise the pilot "(CALLSIGN) NOT IN SIGHT; (TARGET) AUTHORIZED FLIGHT LEAD CONTROL". The flight lead assumes responsibility for weapons and flight safety, flight separation, and altitude adjustments for this pass.

6.7.4.1. Alternative headings are 215 magnetic and 310 magnetic (See **Figure A2.6**.).

6.7.4.2. RCO approval is required for alternate headings.

6.7.4.3. Left or right patterns are authorized.

6.7.4.4. Pop patterns authorized.

6.8. Night Operations.

6.8.1. Blackout operations are not authorized. All aircraft must have anti-collision lights on while operating within R3801 or the Claiborne MOA.

6.8.2. Claiborne night lighting configuration will be at the discretion of the flight lead. Range lighting will not be readjusted for subsequent flights.

6.8.3. The RCO will be equipped with Night Vision Goggles (NVGs).

6.8.4. Pilots operating with NVGs in the restricted airspace may use covert lighting.

6.8.5. Coordinate with the RCO at least 6-hours prior to flight for lighting requirements and intent to use covert aircraft lighting.

6.8.6. For a depiction of the night lighting, see **Figure A2.7**., Night Lighting.

6.9. Night Targets.

6.9.1. All authorized day targets are available for night deliveries. Scoring might not be available for night deliveries.

6.9.2. The following targets have night lighting capability:

6.9.2.1. Conventional Bomb Circle

6.9.2.2. Night TAC

6.9.2.3. Rocket Circle High Angle Strafe (HAS)

6.10. Night Radar Deliveries.

6.10.1. Radar/simulated nuclear deliveries will be on a 121° magnetic heading against the Night TAC target. The minimum pattern altitude no lower than 1,000' AGL.

6.10.2. Downwind will not exceed 3NM spacing from the extended run-in line. Base leg will be a minimum of seven miles from the range.

6.10.3. The aircraft will not be armed for release until established on the run-in line and will ensure switches are safe as soon as practical after delivery.

6.10.4. Aircrew will visually identify the target illumination devices prior to ordnance delivery.

6.11. Weapons Scoring. All scores will be recorded on a score sheet, certified by the RCO, and submitted to the flying unit via fax or email no later than close of business (COB) of that flying day.

6.12. Chaff and Flares.

6.12.1. Chaff and flares may be employed if they will fall within the range target area.

6.12.2. Chaff may be expended below 2,000' MSL over the impact area.

6.12.3. Flares may be expended above 500' AGL near the center of the impact area.

6.12.4. Coordinate with the RCO prior to any chaff or flare use. Flare use may be restricted for weather conditions.

6.13. JTAC / FAC(A) Operations.

6.13.1. CAS missions will be conducted IAW AFI 11-214, Joint Publication 3-09.3, and applicable directives.

6.13.2. JTACs may move about the impact area depending upon the training mission. Approval to operate from any position other than one of the control towers must be granted by the RCO and will be considered based upon the briefed training scenario.

6.13.3. All JTACs utilizing Claiborne Range will receive a range safety and operations briefing before controlling aircraft. JTACs must be familiar with and adhere to all range procedures and restrictions outlined in this instruction. JTACs operating on Claiborne Range will sign out a range Land Mobile Radio (LMR) and always maintain two-way radio contact with the RCO.

6.13.4. JTACs will provide a comprehensive mission briefing to the RCO. This briefing will include planned scenario, targets and attack restrictions, laser usage, and a communications plan.

6.13.5. JTAC/FAC(A)s may use laser designators. Laser designators, such as the SOFLAM, may only be used on targets located in the laser target area. Range finders and IR pointer/illuminators are allowed on any range target.

6.13.6. JTACs will ensure all pilots have visually identified their location, all manned positions, and the target area prior to munitions release.

6.13.7. The RCO can delegate weapons release authority to the JTAC/FAC(A). The RCO is responsible for range safety and maintains overall authority on the range. At any time, the RCO may revoke weapons release authority.

6.13.8. The RCO, JTACs, or pilots must announce “KNOCK IT OFF” for any unsafe condition. If required, the RCO will immediately revoke weapons release authority. Once the situation is resolved, the RCO may delegate weapons release authority to the JTAC.

6.14. Joint Air Attack Team (JAAT).

6.14.1. JAAT operations are authorized in R3801. Profile will include rotary-wing and fixed-wing aircraft performing coordinated close air support.

6.14.2. The RCO is responsible for range safety and maintains overall authority on the range; however, the RCO may delegate mission control and release authority to JAAT flight lead.

6.15. Landing Zone/Drop Zone (LZ/DZ) Procedures.

6.15.1. Several areas within Claiborne Range have been used as non-certified LZs and/or DZs. Users seeking to conduct LZ/DZ training must coordinate with the ROO to establish a potential zone. The prospective user is responsible to certify the zone prior to any LZ/DZ training.

6.15.2. LZ operations are permitted for rotary-wing training only and requires pre-coordination with the ROO and a mission brief with the RCO prior to execution.

6.15.3. DZ events are limited to training bundle drops in support of ground unit training, e.g., SERE training. Release is not authorized until recovery procedures have been established. Personnel drops are not authorized.

6.15.4. The RCO is responsible for range safety and maintains overall authority on the range; however, the RCO may delegate mission control and release authority to the acting Ground Safety Officer or mission commander.

6.16. Joint Operations.

6.16.1. Joint operations are permitted. All joint operations will be established and governed by LOA or other written agreement IAW AFI 25-201 between the ROA and the requesting user.

6.16.2. All written agreements will ensure that the ROA can terminate user activities deemed detrimental to the range's natural, cultural, or physical infrastructure and obtain compensation and redress if required.

6.16.3. Joint operations conducted outside of normal operating hours will incur the cost of AOH and may be subject to reimbursement by the user.

Chapter 7

LASER OPERATIONS

7.1. Laser Procedures.

7.1.1. Claiborne Range is certified for air-to-ground and ground-to-ground laser operations. Laser restrictions are listed in the current copy of the Claiborne Range Laser Certification. This certification letter is available on the Claiborne Range SharePoint.

7.1.2. Missions requiring the use of combat lasers must be submitted for approval in CSE-AF. The RCO has final authority for laser use depending on range and weather conditions.

7.1.3. Laser warning signs will be posted on the range gates prior to laser operations.

7.1.4. Laser designators will only be fired at targets located in the target area. Attack heading for aircraft mounted laser designators is unrestricted.

7.1.5. IR pointers/illuminators may be used on any range target.

7.1.6. All aircraft-mounted lasers must begin within the confines of R-3801 and terminate in the range target area.

7.1.7. Lasers will not be operated without approval of the RCO. The RCO will ensure the laser target area is clear, warn all personnel on the range of impending laser operations, and ensure all range personnel have donned proper laser eye protection before granting approval for laser operations. The RCO will maintain a record of laser use, to include mission number and mission start and stop times. Aircrew will make “lasing” and “laser off” or “switches safe” calls to the RCO.

7.1.8. Laser use is prohibited when standing water, ice or snow is present in the laser target area.

7.1.9. Terminate laser operations immediately if unauthorized personnel are observed in the laser target area, equipment malfunction is observed or suspected, target is lost in the field of view, positive communications with the RCO is lost, or anytime laser safety cannot be assured.

7.1.10. Claiborne Range has two SOFLAMs and an Infrared Zoom Laser Illuminator Designator (IZLID) Infrared (IR) pointer that can be employed from either the main or flank tower with prior coordination.

7.1.11. All targets and associated DPIs listed in **Table A6.1** are authorized for laser use.

7.2. Laser-Only Targets – ORDNANCE NOT AUTHORIZED.

7.2.1. Laser Target Complex. The complex is located 350 meters northeast of the conventional bomb circle and consists of shipping containers simulating a small urban village. The complex can be lighted for easy target identification.

7.2.2. Tanks. There are two M-60 tanks located outside of the urban village. One is located approximately 200 meters east and the other is 60 meters south.

7.2.3. Airfield. The simulated airfield is located approximately 475 meters north of the conventional bomb circle. Targets include simulated revetments, a maintenance hangar, airfield tower, and an F-4 aircraft.

7.2.4. South Maverick. Four Electro Optical (EO) maverick contrast targets, 2 white and 2 black shipping containers, are located approximately 525 meters southwest of the rocket circle.

7.2.5. Heated Tank. Upon request, a simulated heated T-72 tank target is available and located on the 2,000' foul line slightly southwest of the main tower. Thirty (30) minute coordination and preheat time is required.

7.3. Laser Evaluator System- Mobile (LES-M).

7.3.1. Claiborne Range has one LES-M, see **Figure A2.8** for details.

7.3.2. The LES-M requires prior coordination. If use of the LES-M is not requested through CSE-AF prior to the mission, then thirty (30) minutes is required to turn on and function check the system.

7.3.3. LES-M tone can be heard on UHF primary, 298.6.

7.4. Annual Reviews.

7.4.1. The LSO (Laser Safety Officer) is required to review all applicable laser operations with the ROO/ROA (Range Operations Officer/Range Operating Authority) annually and within 45 days of the Laser Certification report's anniversary.

Chapter 8

BATTLEFIELD EFFECTS

8.1. Pyrotechnic Operations.

8.1.1. Units must submit a request to 307 OSS/OSOR, DSN: 331-3171 or Commercial: 318-529-3171, for all pyrotechnic operations. The Range Scheduler will annotate the scheduled mission with Battlefield Effects Operations (BEO) or Pyrotechnic Operations (PO) and note items requested.

8.1.2. Pyrotechnics approval will be based on current USFS fire conditions and mission description.

8.1.3. Flying units will coordinate training with the Battlefield Effects Branch Chief before requesting Claiborne Range time.

8.1.4. See **Table A4.1**., Authorized Pyrotechnic Devices, for a list of approved devices. Units may request authorization for additional pyrotechnic devices through the Range Scheduling office.

8.1.5. Battlefield Effects (BFE) personnel will arrive at Claiborne Range at least 1 1/2 hours prior to scheduled flight time and report to the RCO for a range safety briefing and current range restrictions. BFE personnel will brief the RCO on all planned activities.

8.1.6. Radio contact with Range Control must be always maintained. LMRs will be issued to key personnel before the BFE personnel enter the training space.

8.1.7. All pyrotechnic operations will be confined to an area preapproved by the ROO and RCO. Vehicles will be kept on the roads and in a manner that will not block safety vehicles.

8.1.8. During aircraft dry employment (no lasers, no weapons, aircraft training mode) pyrotechnic operations may be conducted on the range near the simulated runway.

8.1.9. BFE personnel may coordinate/communicate directly with training units during operations; however, radio contact with the RCO must be maintained on the primary range frequency during all training operations.

8.1.10. BFE personnel will check out with the RCO before leaving the range.

8.1.11. BFE personnel can transmit "KNOCK IT OFF" or "ABORT" on the issued LMRs if an unsafe situation occurs. The RCO will echo the "KNOCK IT OFF" or "ABORT" to the aircrew. The RCO and/or ROO will determine when and if the activities may continue.

8.1.12. Battlefield Effects, Fort Polk, LA 71459, (337) 531-5491.

8.1.13. SMOKEY SAMS are not authorized at Claiborne Range.

8.2. Fire Suppression.

8.2.1. The ROO or RCO must contact the United States Forest Service (USFS) Calcasieu District Fire Monitor Officer at 318-473-7160 or the Fire Dispatch Center at 318-473-7035 for fire conditions prior to pyrotechnic operations. All activity will be based on the current fire conditions.

8.2.2. Battlefield Effects personnel must initiate immediate action to suppress any fires started by pyrotechnic devices. In addition, the Battlefield Effects personnel must immediately notify the RCO of the situation. The RCO retains final authority and will determine the best course of action.

Chapter 9

RANGE MAINTENANCE AND CLEARANCE SAFETY

9.1. Range Explosive Ordnance Disposal (EOD) Clearance.

9.1.1. The 307 OSS/OSOR will ensure decontamination and EOD operations are conducted IAW AFMAN 13-212, V1 and 2nd Bomb Wing EODOI 13-2.

9.1.2. In accordance with the Host Tenant Support Agreement, the 2nd Civil Engineering /Explosives Ordnance Disposal (2CES/CED) is responsible for range EOD clearing, inspections as required, briefing all newly assigned range personnel prior to assuming duties, and will brief all range personnel annually.

9.1.3. The 307 Bomb Wing Weapons Safety personnel are responsible for spot inspections of range decontamination and disposal operations.

9.1.4. EOD operations will be conducted as required based on range utilization.

9.1.5. Fund cite will be provided to EOD personnel for travel and per diem. Cross organization funding will be processed in Defense Travel System (DTS) and approved by 307 BW/FM.

9.2. Detonation Site Maintenance.

9.2.1. The detonation site must be in accordance with the 2d Bomb Wing EODOI 13-2. Efforts to mitigate the risks of rogue fragments will be demilitarized using a fragmentation distance of 4,000 feet for detonation of inert general-purpose bombs. Munitions will be placed in a trench deep enough that they are positioned below ground level. The trench used for detonation of inert general-purpose bombs will have walls on three sides in an effort to direct any rogue fragments away from the range operating facility.

9.2.2. "Clean-up" shots of C4 will be performed independently from inert general purpose bombs munition detonations.

9.2.3. If a constructed barrier is in place, the EOD/UXO structure may use Mil-10 size HESCO Bags; 7'3" tall, 5' thick, and is in 25' long sections. (Example only)

9.3. Airspace. Prior to detonations, Restricted Area-3801 A & B will be scheduled through CSE-AF. The scheduling office will confirm the scheduled airspace with the ROO, EOD lead, Houston FAA Center and Polk Approach.

9.4. Reports. EOD clearance reports and other related documentation shall be on the 307 OSS shared drive \307 OSS\7-Airspace_and_Range\5 - Range\EOD Real Property (CE, CONS, SFS); EOD range clearance FY Folder.

Chapter 10

EMERGENCY PROCEDURES

10.1. Emergency Airfield. The nearest airfield is AEX, 10 NM northeast of Claiborne Range.

10.2. Hung Ordnance. The pilot may selectively jettison remaining ordnance as coordinated between the flight lead and RCO. Prior to departing the restricted area, the aircrew will position all armament switches to off or safe.

10.3. Jettison.

10.3.1. The primary jettison area for all aircraft except the B-52 is the night tactical target.

10.3.2. Aircraft will fly on a heading of 125 +/- 10 degrees avoiding over flight of range towers and maintenance buildings. The minimum jettison altitude is 500' AGL (1,500' MSL at night).

10.3.3. B-52 jettison capability exists on South TAC or Night TAC; 5500’ MSL or 3500’ for aircrew LOWAT qualified and current. The South TAC is the preferred jettison target.

10.4. Unusual Situations.

10.4.1. Runaway Gun

10.4.1.1. Recover from delivery, keeping the aircraft pointed down range until the gun ceases to fire.

10.4.1.2. Safe all armament switches.

10.4.1.3. Depart the range.

10.4.2. Off Range Release

10.4.2.1. Safe all armament switches.

10.4.2.2. Determine location of impact.

10.4.2.3. The RCO will notify the 307 OSS/OSOR with all information available: type object, time, location, if known, and best guess if not known.

10.4.3. Inadvertent Release

10.4.3.1. The pilot will immediately report an inadvertent release to the RCO.

10.4.3.2. The RCO will cease range operations and direct all aircraft to complete an armament safety check.

10.4.3.3. After coordination with the RCO, the pilot may release remaining ordnance on range property if necessary to ensure a safe aircraft recovery.

10.4.3.4. Range personnel may be able to help identify the location of the inadvertently released ordnance and coordinate for recovery (if needed).

10.4.4. Ground Personnel Issues.

10.4.4.1. If an event occurs on range that requires immediate RCO attention the RCO may direct the aircraft to complete an armament safety check and hold high while range

personnel deal with the issue. Examples of possible issues include: Medical, Range incursions by civilians, etc.

10.4.4.2. For medical issues the nearest hospital is Alexandria Emergency Hospital located 14 miles from the range.

10.5. Fire Suppression.

10.5.1. If a fire occurs on range that requires immediate suppression the RCO will direct the aircraft to complete an armament safety check and hold high while range personnel fight the fire.

10.5.2. The flight may be asked to depart the range if the fire is uncontrollable or spreading off range.

10.6. Ejection/Aircraft Crash.

10.6.1. The RCO will immediately cease flight operations, close the range and reference the Claiborne Range Quick Reaction Checklist.

10.6.2. Flight lead will ensure all remaining flight members perform an armament safety check.

10.6.3. Flight lead will assist the RCO in determining the location of the downed aircraft/aircrew, and will assist until released or fuel state requires departure.

10.6.4. The remaining flight members will depart the range and assist as directed.

DAVID R. ANDERSON, Col, USAFR
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

FAA Order 7110.65(x), Air Traffic Control

AFI 11-MDS Series

AFI 11-214, Air Operations Rules and Procedures, 8 July 2020

AFI 13-112V1, Joint Terminal Attack Controller Training Program, 29 September 2017

AFPD 13-2, Air Traffic, Airfield, Airspace and Range Management, 2 January 2019

AFI 32-1015, Integrated Installation Planning, 30 July 2019

AFI 33-322, Records Management and Information Governance Program, 27 Jul 2021

AFI 48-139, Laser and Optical Radiation Protection Program, 29 September 2014

AFI 91-202, US Air Force Mishap Prevention Program, 11 March 2020

AFI 91-212, Bird/Wildlife Strike Hazard (BASH) Management Techniques, 31 May 2018

AFMAN 11-202V3, Flight Operations, 9 June 2020

AFMAN 13-212, Range Planning and Operations, 22 June 2018

AFMAN 33-322, Records Management and Information Governance Program, 23 March 2020

AFMAN 91-203, Air Force Occupational Safety, Fire & Health Standards, 11 December 2018

AFTTP 3-2.5, Multi-Service Brevity Codes, 1 June 2018

DAFMAN 13-201, Airspace Management, 09 Dec 2020

DAFMAN 13-217, Drop Zone, Landing Zone, and Helicopter Landing Zone Operations, 21 April 2021

DAFI 33-360, Publications and Forms Management, 30 Nov 2015

DAFMAN 91-223, Aviation Safety Investigations and Reports, 27 May 2020

Joint Publication 3-09.3, Close Air Support, 10 June 2019

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AF—Air Force

AFDPO—Air Force Departmental Publishing Office

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AOH—Additional Operating Hours

APC—Armored Personnel Carrier

ATCAA—Air Traffic Control Assigned Airspace

BAFB—Barksdale Air Force Base

BDU—Bomb Dummy Unit

BEO—Battlefield Effects Operations

BW—Bomb Wing

CAS—Close Air Support

CES—Civil Engineering Squadron

COB—Close of Business

CSAR—Combat Search and Rescue

CSE-AF—Center Scheduling Enterprise

CST—Central Standard Time

DoD—Department of Defense

DPI—Desired Point(s) of Impact

DSN—Defense Switched Network (formerly AUTOVON)

DTS—Defense Travel System

DZ—Drop Zone

ECM—Electronic Countermeasures

EO—Electro Optical

EOD—Explosives Ordnance Disposal

EW—Electronic Warfare

FAA—Federal Aviation Administration

FAC—Forward Air Controller

FM—Frequency Modulated

FTU—Formal Training Unit

GPS—Global Positioning System

HAS—High Angle Strafe

HE—High Explosive

HLZ—Helicopter Landing Zone

INS—Inertial Navigation System

IR—Infrared

IZLID—Infrared Zoom Laser Illuminator Designator

JRTC—Joint Readiness Training Center (Fort Polk, LA)

JTAC—Joint Terminal Attack Controller

JTE—Joint Threat Emitter

KAEX—Alexandria International Airport, LA

LA—Louisiana

LES-M—Laser Evaluator System - Mobile

LMR—Land Mobile Radio

LZ—Landing Zone

MOA—Military Operating Area

MDS—Mission Design Series (Aircraft type)

MSL—Mean Sea Level

MUTES—Multiple Threat Emitter System

NM—Nautical Mile

NVG—Night Vision Goggles

OPR—Office of Primary Responsibility

OSOR—Airspace and Range Management

OSS—Operations Support Squadron

PA—Public Affairs

PO—Pyrotechnic Operations

RCO—Range Control Officer

RDS—Records Disposition Schedule

ROA—Range Operating Authority

ROO—Range Operations Officer

SOFLAM—Special Operations Forces Laser Acquisition Marker

TAC—Tactical

TGP—Targeting Pod

TP—Target Practice

TTS—Two Target Strafe

UHF—Ultra High Frequency

USFS—United States Forest Service

UTA—Unit Training Assembly

UXO—Unexploded Ordnance

VHF—Very High Frequency

VMC—Visual Meteorological Conditions

WDZ—Weapons Danger Zone

Attachment 2
MAPS, CHARTS, AND GRAPHICS
Figure A2.1. Range Boundaries (Expanded Boundary in red; Restricted Boundary in blue).

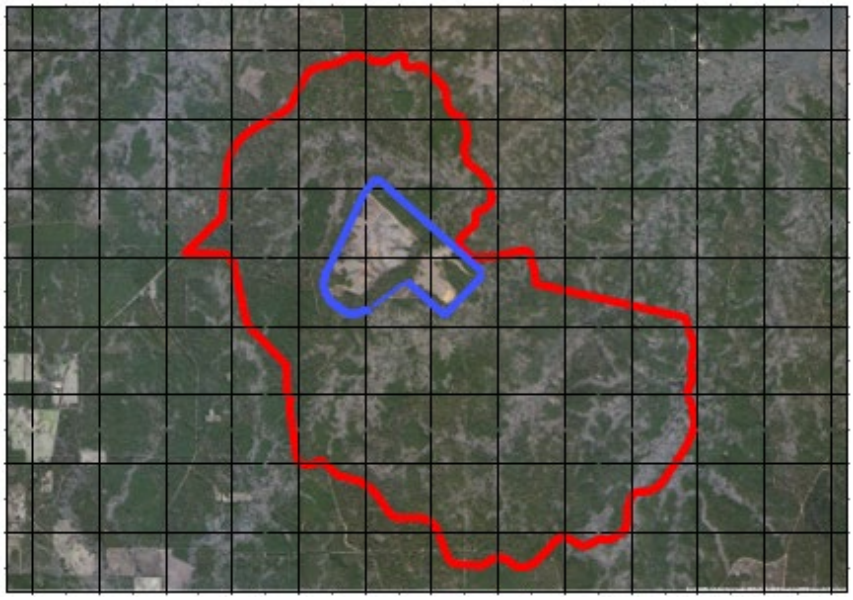


Figure A2.2. Impact Area (Insert: Range Operations Area).

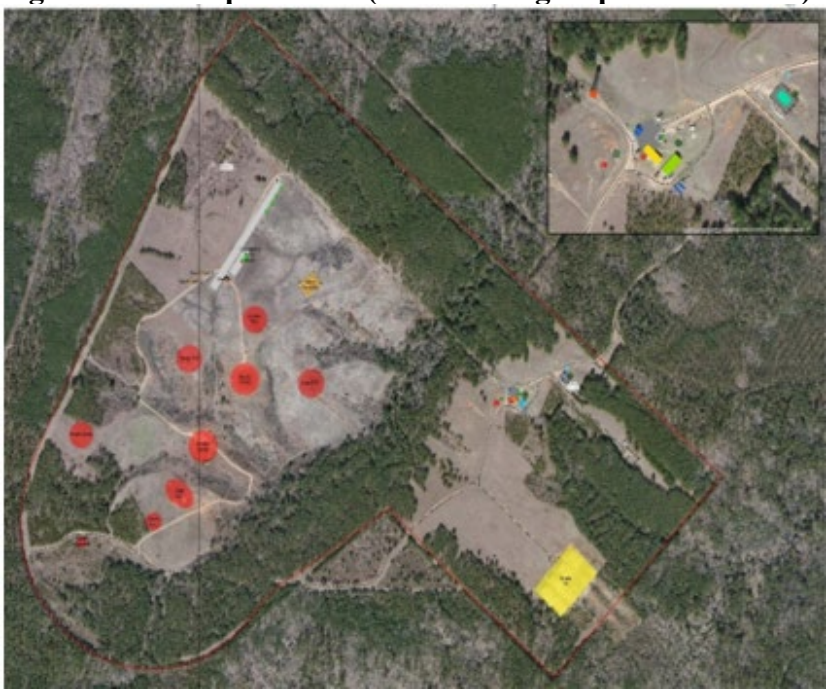


Figure A2.3. R-3801 A/B/C.

Figure A2.4. Claiborne MOA.

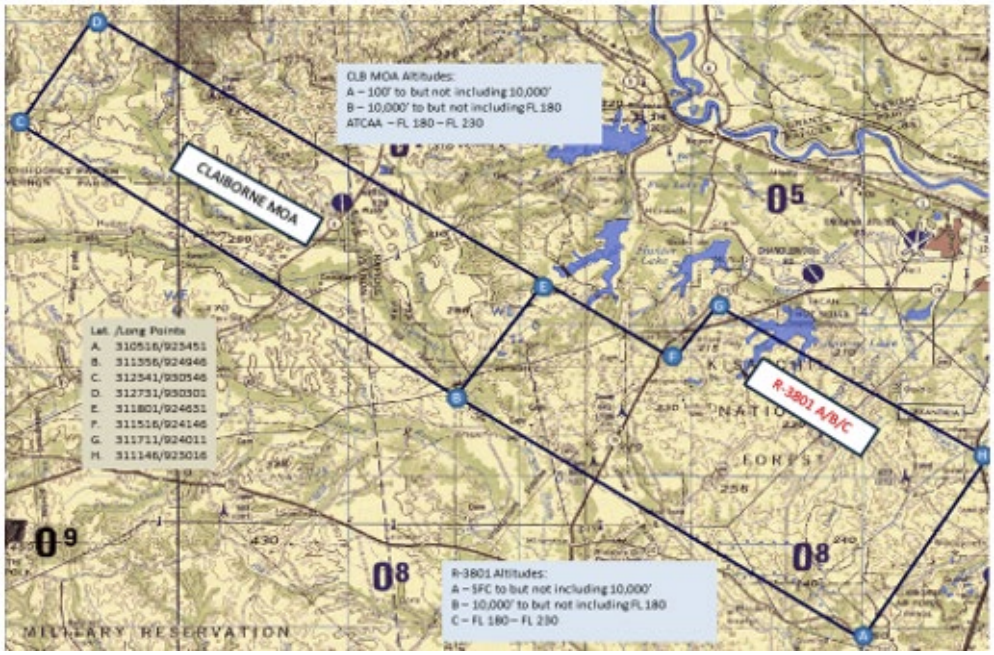


Figure A2.5. Caddo ATCAA.

Figure A2.6. Standard Run-In Headings.

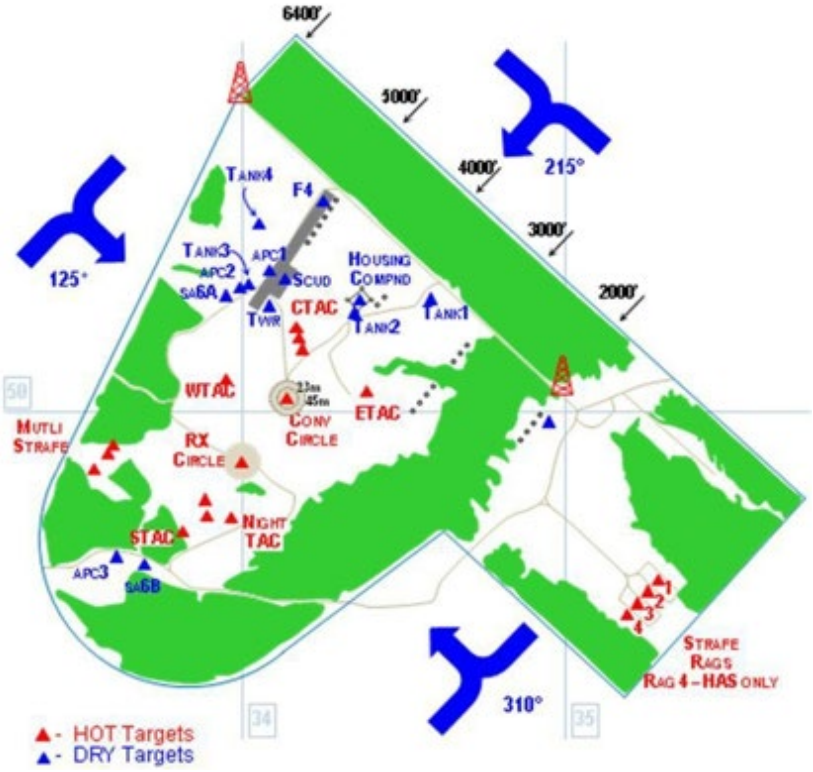


Figure A2.7. Night Lighting.

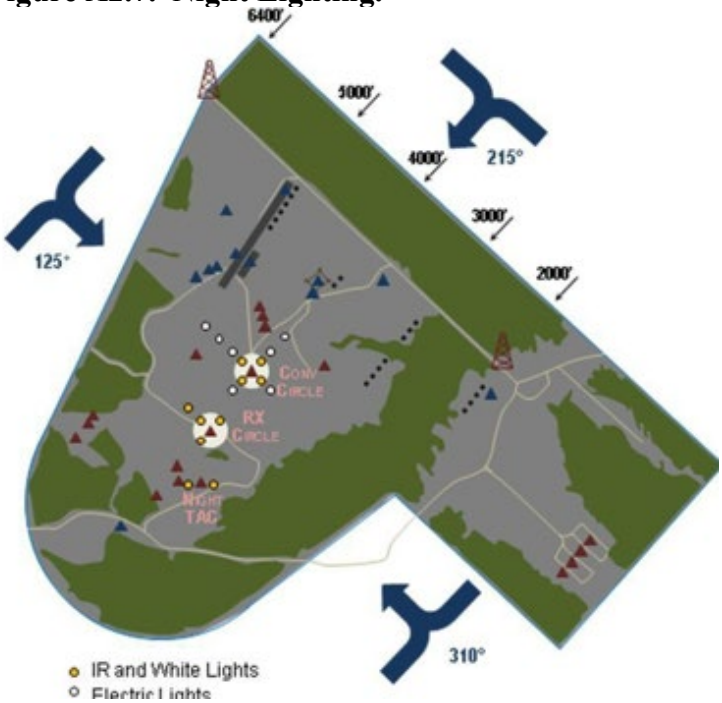


Figure A2.8. LES-M Location.

Claiborne Range Laser Evaluator System-Mobile (LES-M) Elevation: 199 ft MSL

Transmitting Frequency: 298.6

UTM Grid Zone	15R	MGRS Coordinates	WQ3403150376
Decimal Degrees Latitude (D.d)	N31.186946	Decimal Degrees Longitude (D.d)	W092.642822
UTM Easting (m)	534031.508	UTM Northing (m)	3450376.387
WGS84 Latitude (d:m:s)	N31:11:13.03522	WGS84 Longitude (d:m:s)	W092:38:34.16928

Attachment 3
SIMULATED THREAT SYSTEMS

Table A3.1. The following table lists the simulated threat systems available at Claiborne Range.

THREAT	TRTG	JTE		THREAT	TRTG	JTE
SA-2 D - Guideline/FanSong		X		Superfledermaus		X
SA-3 - GOA/LowBlow		X		Dog Ear		X
SA-6 - Gainful/StraightFlush		X		SA-8 - Gecko/Land Roll	X	
Flapwheel		X		ZSU-23/4 /Gundish	X	

Table A3.2. The JTE uses mode 3 to track aircraft/The TRTG uses visual acquisition to track aircraft.

JTE EW Scenarios		Dual Combos	Triple Combos
Scenario	Threat	1 & 2	1, 2 & 3
1	SA-2D Guideline/FanSong	1 & 3	1, 2 & 6
2	SA-3 GOA/LowBlow	1 & 4	1, 2 & 7
3	SA-6 Gainful/StraightFlush	1 & 5	1, 2 & 8
4	Flap Wheel	1 & 6	1, 3 & 4
5	Superfledermaus	1 & 7	1, 3 & 5
6	SA-13 Dog Ear	1 & 8	1, 4 & 6
7	SA-6 TA Only	2 & 3	1, 5 & 6
8	SA-6 TT/TI Only	2 & 6	
		2 & 7 2 & 8	

Scenario #	Signal	Scenario #	Signal
1	Track	4	Acquisition
	Missile Guidance		Track
2	Acquisition	5	Acquisition
	Track		Track
	Missile Guidance	6	Acquisition
3	Acquisition 1,3	7	Acquisition 1,3
	Acquisition 2,4		Acquisition 2,4
	Track	8	Track
	Illuminator		Illuminator
Note: Not all threats are available simultaneously from the same transmitter.			

Attachment 4
AUTHORIZED PYROTECHNIC DEVICES
Table A4.1. Authorized Pyrotechnic Devices.

(Request for approval for pyrotechnic devices not listed below may be submitted to the Airspace and Range Scheduling office; DSN: 331-3171/3172 or Commercial: 318-529-3171/3172.)	
Pyrotechnic Device	**Description**
LX09 44mm Bowman	**(also classified as LX11 or BAR- C). The Bowman replicates a shoulder fired rocket propelled grenade or surface- to-air missile. It produces the signature of a single white ball of fire approximately 2" in diameter and travels approximately 330 feet high. The white ball of fire burns out at a maximum altitude in peak trajectory. MSD -10 meters, Fire Potential - Low**
LX45 Vulcan Simulator	**(also classified as Tracer Board). The Vulcan simulator replicates tracer rounds with either green or red signatures. The tracer signatures travel approximately 50 yards. The simulator has 4 rows with 15 tubes to each row. When firing one row at a time, this device should produce 15 shots fired at approximately 0.05 seconds to 1.0 second intervals. Fire Potential - Moderate**
G982 – White Smoke	**Used to replicate smoke or White Phosphorus IDF, MSD – 35 meters, Fire Potential – LOW**
K511	**Used to replicate large volume smoke, MSD – 35 meters, Fire Potential – LOW**
L366 – Air Burst Simulator	**Used to replicate Variable Time fuse IDF or unsafe to use ground burst simulators, MSD – No overhead obstructions, No over- flying aircraft within 100 meters, Fire Potential – LOW**
L594 – Ground Burst Simulator	**Used to replicate Point Detonated IDF, MSD – 35 meters, has whistle before detonation, Fire Potential – LOW**
L601 – Grenade Simulator	**Used to replicate ground/secondary explosions, MSD – 35 meters, No whistle before detonation, Approximately ½ length of Ground Burst simulator, Fire Potential – MODERATE**
LX03 – Black Smoke	**Used to replicate burning or destroyed equipment, MSD – 10 meters, Fire Potential – MODERATE**
LX04/06	**Replicates IED detonation and RPG impact, MSD – 10 meters, Fire Potential – MODERATE**
Note: MSD is Minimum Safe Distance in the above chart **IDF- Indirect Fire**	

Attachment 5
LETTER OF AGREEMENTS (LOAs)
Figure A5.1. CLAIBORNE A & B MOAS/ATCAA PROCEDURES (Page 1).

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA

LETTER OF AGREEMENT

EFFECTIVE DECEMBER 11, 2014

SUBJECT: CLAIBORNE A & B MOAS/ATCAA PROCEDURES

1. **PURPOSE.** The purpose of this agreement is to define and prescribe procedures and responsibilities to be used when conducting flight operations in the CLAIBORNE A & B MOAs/ATCAA. The Scheduling Authority has changed from the 917th Wing to the 307th Bomb Wing.

2. **CANCELLATION.** The Houston ARTC Center, Fort Polk ATC, and 917th Wing, Barksdale AFB, Louisiana, Letter of Agreement, Subject: Claiborne MOA/ATCAA and Restricted Area 3801 (R-3801) Procedures, dated June 10, 2004, is cancelled.

3. **SCOPE.** This letter of agreement is applicable to Houston ARTC Center (Houston Center), Fort Polk Approach and the 307th Bomb Wing (307th). Other military units are authorized to use these procedures after coordination with the 307th OSS scheduling office at Barksdale AFB, LA.

4. **ABBREVIATIONS.**

AFB	Air Force Base
APPROACH	Fort Polk Army Radar Approach Control
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
BW	Bomb Wing
CENTER	Houston Air Route Traffic Control Center
COMM	Commercial
CSE	Center Scheduling Enterprise
DSN	Defense Switched Network
FAA	Federal Aviation Administration
FAAO	Federal Aviation Administration Order
FL	Flight Level
IAP	Instrument Approach Procedure
IFR	Instrument Flight Rules
JRTC	Joint Readiness Training Center
LOA	Letter of Agreement
MARSA	Military Authority Assumes Responsibility for Separation of Aircraft
MILOPS	Military Operations
MOA	Military Operations Area
OSS	Operations Support Squadron
RTB	Return to Base
SUA	Special Use Airspace
USAFR	United States Air Force Reserve
VFR	Visual Flight Rules

Figure A5.2. CLAIBORNE A & B MOAS/ATCAA PROCEDURES (Page 2).

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL;
AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT, EFFECTIVE: DECEMBER 11, 2014

5. RESPONSIBILITIES –

a. 307th BW will:

(1) The 307th OSS is the Scheduling Authority for the CLAIBORNE A & B MOAs/ATCAA.

(2) All airspace requests for CLAIBORNE A & B MOAs/ATCAA will be scheduled through CSE.

(3) Users requesting airspace must establish a Barksdale CSE account. To do so, log onto the following web site, https://cseaf.eglin.af.mil/CSE/home.aspx. For CSE support, contact the CSE help desk at DSN: 872-4491 or COMM: 850-882-4491, Option 7 or e-mail CSEAFHelp@eglin.af.mil, Monday-Friday, 0730-1630. At Barksdale, the 307th OSS is the local CSE Administrators, contact at DSN 331-3171/3160, or COMM 318-529-3171/3160.

(4) The Scheduling Authority must submit requested schedules as follows.

(a). Forward the requested schedule to Houston Center by 1630 Local on the day prior to intended use via MILOPS Workstation. The Scheduling Authority will follow-up with a phone call to the MAC (281-230-5563) to verify information.

(b). If the MILOPS Workstation is inoperable or cannot be accessed, schedule may be requested via facsimile (281-230-6260), followed by a phone call (281-230-5563) to verify receipt.

(c). Random requests by the scheduler may be honored on a case by case basis, conditions permitting. Same day requests requiring a NOTAM must be requested at least 2 hours in advance to allow for a NOTAM to be issued.

(d). Requests must include the required altitude block and the timeframe necessary to accomplish the scheduled mission.

(e). Approved airspace requests must be cancelled as soon as determination is made that airspace will not be used.

(f). When the ATCAA is scheduled by users that are not a party to this LOA, the Scheduling Authority must provide them a copy of this agreement. Ensure all aircrew are familiar with applicable procedures and restrictions.

b. CENTER will:

(1) Approve or disapprove the request for airspace or suggest alternate times for accomplishing the mission.

Figure A5.3. CLAIBORNE A & B MOAS/ATCAA PROCEDURES (Page 3).

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL;
AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT, EFFECTIVE: DECEMBER 11, 2014

(2) Center must provide participating aircraft priority of use of the CLAIBORNE A & B MOAs/ATCAA under normal conditions. CLAIBORNE A & B MOAs/ATCAA will be recalled or denied only for the following reasons:

(a). Emergency conditions (national, aircraft, or facility).

(b). Severe weather conditions.

(c). Severe traffic congestion.

(d). When equipment outages (radar, radio, etc.) reduce Houston Center capability to the point where air safety would be affected.

(3) Advise APPROACH when CLAIBORNE A & B MOAs/ATCAA has been scheduled.

c. APPROACH will:

(1) Upon notification of inbound traffic to CLAIBORNE A & B MOAs/ATCAA, take immediate action to clear the airspace(s) of all nonparticipating IFR and VFR air traffic.

(2) Approach may authorize the transit of nonparticipating aircraft through CLAIBORNE A & B MOAs/ATCAA provided there is no impact to participating aircraft. Approach will provide standard IFR separation in accordance with FAAO JO 7110.65 to nonparticipating aircraft in MOA airspace.

(3) Notify Houston Center (Polk sector) 10 minutes prior to aircraft entering CLAIBORNE B MOA/ATCAA.
NOTE: During times when FL 180 to FL 230 is needed, prior approval must be obtained from the CENTER Polk sector controller.

(4) Advise Claiborne Range Facility of inbound traffic for CLAIBORNE A & B MOAs/ATCAA, furnishing aircraft call sign, type, and number in flight.

(5) Notify Houston Center when aircraft depart CLAIBORNE A & B MOAs/ATCAA.

d. CLAIBORNE RANGE will:

(1) Coordinate with APPROACH should aircraft inbound to CLAIBORNE A & B MOAs/ATCAA, initially contact Claiborne Range Facility, furnishing aircraft call sign, type, and number in flight.

(2) Notify APPROACH when aircraft utilizing CLAIBORNE A & B MOAs/ATCAA depart the range, furnishing call sign, type, and number in flight.

(3) Hold aircraft out of CLAIBORNE A & B MOAs/ATCAA until APPROACH advises that all nonparticipating IFR and VFR traffic are clear of the airspace(s).

Figure A5.4. CLAIBORNE A & B MOAS/ATCAA PROCEDURES (Page 4).

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL;
AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT, EFFECTIVE: DECEMBER 11, 2014

6. GENERAL.

a. Participating Aircraft" are defined as those aircraft assigned and operating within the CLAIBORNE A & B MOAs/ATCAA, defined herein.

b. MARSA will apply between all participating aircraft assigned and operating in R-3801 A/B/C, defined herein.

c. The appropriate CENTER may request, and APPROACH may approve, the transit of nonparticipating aircraft through active CLAIBORNE A & B MOAs/ATCAA airspace provided there is no significant impact to participating aircraft. APPROACH must provide standard IFR separation in accordance with FAAO JO 7110.65 to nonparticipating aircraft in said airspace.

7. Radio Failure Procedures.

a. An aircraft experiencing communications failure while operating within CLAIBORNE A & B MOAs/ATCAA will squawk Code 7700 for 1 minute, then squawk and remain on Code 7600.

b. Weather conditions permitting, flights will return VFR.

c. If weather precludes a VFR return, maintain last assigned altitude, and proceed direct to BARGS IAF. Descend in holding to 12,000 feet MSL, and execute the IAP for the active runway at Barksdale AFB.

8. PARTICIPATING AIRCRAFT PROCEDURES.

a. Remain within the lateral and vertical boundaries of the assigned SUA.

b. Squawk the assigned Mode 3 discrete code.

c. Advise APPROACH at least five minutes prior to exit when ready to RTB.

d. For Electronic Warfare Training, contact CLAIBORNE Range Control Officer or "Medicine Man" on UHF primary 298.6, secondary 268.1.

Figure A5.5. CLAIBORNE A & B MOAS/ATCAA PROCEDURES (Page 5).

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL;
AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT, EFFECTIVE: DECEMBER 11, 2014

9. ATTACHMENTS.

ANNEX – CLAIBORNE A & B MOAs/ATCAA depiction

Jim D'Ambrosio T.
Air Traffic Manager
Houston ARTC Center

T. Glenn Moore
Colonel, U.S. Army
Commanding
DEC 0 5 2014

Jonathan M. Ellis Colonel, USAFR
Commander, 307th Bomb Wing
Barksdale AFB, Louisiana

Michael, D. Rizzo
Air Traffic Representative
Central Service Area

Joseph J. Meaux III
Chief, Airfield Division
DPTMS

Figure A5.6. CLAIBORNE A & B MOA/ATCAA ANNEX.

HOUSTON ARTC CENTER; FORT POLK ARMY RADAR APPROACH CONTROL;
AND 307TH BOMB WING, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT, EFFECTIVE: DECEMBER 11, 2014

ANNEX

CLAIBORNE A & B MOA/ATCAA

Figure A5.7. PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C) (Page 1).

FEDERAL AVIATION ADMINISTRATION

CENTRAL AIR TRAFFIC SERVICES

JOINT USE RESTRICTED AREA LETTER OF PROCEDURE

SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C)

EFFECTIVE: OCTOBER 15, 2015

1. **PURPOSE.** The purpose of this agreement is to define and prescribe procedures as well as responsibilities to be used when conducting flight operations in R-3801 A/B/C.

2. **CANCELLATION.** The Joint Use Restricted Area Letter of Procedure, SUBJECT: Procedures for Use of Restricted Areas 3801 A/B/C (R-3801 A/B/C) dated December 11, 2014, is cancelled.

3. **SCOPE.** In accordance with 14 CFR 73.13 and 14 CFR 73.15, this letter establishes procedures for use of R-3801 A/B/C by Houston ARTC Center (the Controlling Agency); 307th Bomb Wing, Barksdale AFB, LA (the Using Agency); and Fort Polk Approach Control for operations within R-3801 A/B/C. Other military units are authorized to use these procedures after coordination with the 307th OSS scheduling office at Barksdale AFB, LA.

4. **ABBREVIATIONS.**

AFB	Air Force Base
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
BW	Bomb Wing
CENTER	Houston Air Route Traffic Control Center
CFR	Code of Federal Regulations
COMM	Commercial
CSE	Center Scheduling Enterprise
DSN	Defense Switched Network
FAA	Federal Aviation Administration
FAAO	Federal Aviation Administration Order
FL	Flight Level
IAF	Initial Approach Fix
IAP	Instrument Approach Procedure
IFR	Instrument Flight Rules
JRTC	Joint Readiness Training Center
LOA	Letter of Agreement
MARSA	Military Authority Assumes Responsibility for Separation of Aircraft
MOA	Military Operations Area
OSS	Operations Support Squadron
RTB	Return to Base
SUA	Special Use Airspace
USAFR	United States Air Force Reserve
VFR	Visual Flight Rules

Figure A5.8. PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C) (Page 2).

FEDERAL AVIATION ADMINISTRATION, CENTRAL AIR TRAFFIC SERVICES, JOINT USE LETTER OF PROCEDURE, SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C), EFFECTIVE: 10/15/15

5. **RESPONSIBILITIES.**

a. 307th BW will:

(1) The 307th OSS is the Scheduling Authority for R-3801 A/B/C.

(2) R-3801 A/B/C is scheduled utilizing CSE.

(3) Users requesting airspace must establish a Barksdale CSE account. To do so, log onto the following web site, https://cseaf.eglin.af.mil/CSE/home.aspx. For CSE support, contact the CSE help desk at DSN: 872-4491 or COMM: 850-882-4491, Option 7 or e-mail CSEAFHelp@eglin.af.mil, Monday-Friday, 0730-1630. At Barksdale, the 307th OSS is the local CSE Administrators, contact at DSN 331-3171/3160, or COMM 318-529-3171/3160.

(4) The Scheduling Authority must submit requested schedules as follows.

(a) Forward the requested schedule to Center by 1630 Local on the day prior to intended use via the MILOPS Workstation. The Scheduling Authority will follow-up with a phone call to the MAC (281-230-5563) to verify information.

(b) If the MILOPS Workstation is inoperable, or cannot be accessed, schedule may be requested via facsimile (281-230-6260), followed by a phone call (281-230-5563) to verify receipt.

(c) Random requests by the scheduler may be honored on a case by case basis, conditions permitting. Same day requests requiring a NOTAM must be requested at least 2 hours in advance to allow for a NOTAM to be issued.

(d) Requests must include the required altitude block and the timeframe necessary to accomplish the scheduled mission.

(e) Approved airspace requests must be cancelled as soon as determination is made that airspace will not be used.

(f) When R-3801 A/B/C is scheduled by users that are not a party to this LOA, the Scheduling Authority must provide them a copy of this agreement. Ensure all aircrew are familiar with applicable procedures and restrictions.

b. Center will:

(1) Approve or disapprove the request for airspace or suggest alternate times for accomplishing the mission.

(2) Provide participating aircraft priority of use of the R-3801 A/B/C under normal conditions. R-3801 A/B/C will be recalled or denied only for the following reasons.

(a) Emergency conditions (national, aircraft, or facility).

(b) Severe weather conditions.

2

Figure A5.9. PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C) (Page 3).

FEDERAL AVIATION ADMINISTRATION, CENTRAL AIR TRAFFIC SERVICES, JOINT USE LETTER OF PROCEDURE, SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C), EFFECTIVE: 10/15/15

(c) Severe traffic congestion.

(d) When equipment outages (radar, radio, etc.) reduce Center capability to the point where air safety would be affected.

c. Approach will:

(1) Upon notification of inbound traffic to R-3801 A/B/C, take immediate action to clear R-3801 A/B/C of all nonparticipating IFR and VFR air traffic.

(2) May authorize the transit of nonparticipating aircraft through R-3801 A/B/C provided there is no impact to participating aircraft. APPROACH will provide standard IFR separation in accordance with FAAO JO 7110.65 to nonparticipating aircraft in MOA airspace.

(3) Notify Center (Polk-Low sector) 10 minutes prior to aircraft entering R-3801 A/B/C.

NOTE: During times when R-3801C is requested, prior approval must be obtained from the Center (Polk-Low sector) controller.

(4) Advise Claiborne Range Facility of inbound traffic for R-3801 A/B/C, furnishing aircraft call sign, type, and number in flight.

(5) Advise Claiborne Range Facility when R-3801 A/B/C is clear of all nonparticipating IFR and VFR traffic. (This notification will be accomplished prior to switching inbound aircraft to Claiborne Range Facility.)

(6) Change aircraft to Claiborne Range Facility frequency prior to aircraft entering R-3801 A/B/C.

(7) Notify Center when aircraft depart R-3801 A/B/C.

d. CLAIBORNE Range will:

(1) Coordinate with Approach should aircraft inbound to R-3801 A/B/C initially contact Claiborne Range Facility, furnishing aircraft call sign, type, and number in flight.

(2) Notify Approach when aircraft utilizing R-3801 A/B/C depart the range, furnishing call sign, type, and number in flight.

(3) Hold aircraft out of R-3801 A/B/C until Approach advises them that all nonparticipating IFR and VFR traffic is clear of R-3801 A/B/C and that the aircraft are cleared onto R-3801 A/B/C.

6. **GENERAL.**

a. "Participating Aircraft" are defined as those aircraft assigned and operating within R-3801 A/B/C, defined herein.

b. MARSA must apply between all participating aircraft assigned and operating in R-3801 A/B/C, defined herein.

3

Figure A5.10. PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C) (Page 4).

FEDERAL AVIATION ADMINISTRATION, CENTRAL AIR TRAFFIC SERVICES, JOINT USE LETTER OF PROCEDURE, SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C), EFFECTIVE: 10/15/15

c. The Center may request, and Approach may approve, the transit of nonparticipating aircraft through active R-3801 A/B/C airspace provided there is no significant impact to participating aircraft. Approach must provide standard IFR separation in accordance with FAAO JO 7110.65 to nonparticipating aircraft in said airspace.

7. **RADIO FAILURE PROCEDURES.**

a. An aircraft experiencing communications failure while operating within R-3801 A/B/C must squawk Code 7700 for 1 minute, then squawk and remain on Code 7600.

b. Weather conditions permitting, flights will return VFR.

c. If weather precludes a VFR return, maintain last assigned altitude, and proceed direct to BARGS IAF. Descend in holding to 12,000 feet MSL, and execute the IAP for the active runway at Barksdale AFB.

8. **PARTICIPATING AIRCRAFT PROCEDURES.**

a. Remain within the lateral and vertical boundaries of the assigned SUA.

b. Squawk the assigned Mode 3 discrete code.

c. Advise Approach at least five minutes prior to exit when ready to RTB.

d. Contact CLAIBORNE Range on UHF primary 298.6, secondary 268.1.

Figure A5.11. PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C) (Page 5).

FEDERAL AVIATION ADMINISTRATION, CENTRAL AIR TRAFFIC SERVICES, JOINT USE LETTER OF PROCEDURE, SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C), EFFECTIVE: 10/15/15

9. **ATTACHMENTS.** ANNEX – R-3801 A/B/C Depiction.

Jim D'Ambrosio
Air Traffic Manager
Houston ARTC Center

Timothy P. McGuire
Brigadier General, U.S. Army
Commanding
Fort Polk, Louisiana

David B. McConathy
Chief, Army Radar Approach Control
Fort Polk Army Airfield
Fort Polk, Louisiana

Michael D. Rizzo
Air Traffic Representative
FAA, ATO Central Service Center

Bruce R. Cox
Colonel, USAFR
Commander, 307th Bomb Wing
Barksdale AFB, Louisiana

Figure A5.12. R-3801 A/B/C ANNEX.

FEDERAL AVIATION ADMINISTRATION, CENTRAL AIR TRAFFIC SERVICES, JOINT USE LETTER OF PROCEDURE,
SUBJECT: PROCEDURES FOR USE OF RESTRICTED AREAS 3801 A/B/C (R-3801 A/B/C), EFFECTIVE: 10/15/15

ANNEX

R-3801 A/B/C

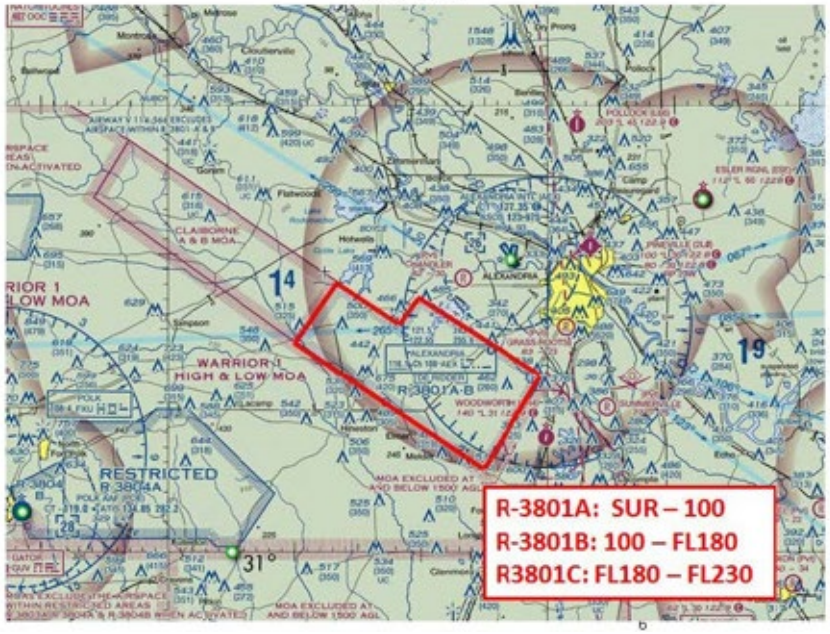


Figure A5.13. PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA/ATCAAS. (Page 1).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; FORT POLK ARAC, FORT POLK, LOUISIANA; FORT WORTH ARTC CENTER; AND LAKE CHARLES TRACON

LETTER OF AGREEMENT

EFFECTIVE: MARCH 1, 2018

SUBJECT: PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA / ATCAAS

1. **PURPOSE.** This Letter of Agreement establishes responsibilities and procedures for the control of aircraft operations in the WARRIOR 1, 2, and 3 MOA / ATCAAs.

2. **CANCELLATION.** This agreement cancels and supersedes the Houston ARTC Center; Joint Readiness Training Center, Fort Polk, Louisiana; Fort Polk Air Traffic Control, Fort Polk, Louisiana; Fort Worth ARTC Center; and Lake Charles TRACON Letter of Agreement; SUBJECT: Procedures for Operations in the WARRIOR MOA / ATCAAs, dated October 15, 2015, and all revisions thereto.

3. **SCOPE.** The procedures outlined herein are applicable to Houston ARTC Center; Joint Readiness Training Center, Fort Polk, Louisiana; and Fort Polk Approach Control for aircraft operating in the WARRIOR MOA / ATCAAs.

4. **ABBREVIATIONS.**

AGL	Above Ground Level
ARAC	Army Radar Approach Control
ATCAA	Air Traffic Control Assigned Airspace
AT & A	Air Traffic and Airspace
IFR	Instrument Flight Rules
JO	Joint Order
JRTC	Joint Readiness Training Center
M-F	Monday through Friday
MAC	Military Automation Coordinator
MADE	Military Airspace Data Entry
MARSA	Military Authority Assumes Responsibility for Separation of Aircraft
MOA	Military Operations Area
MSL	Mean Sea Level
POLK APPROACH	Fort Polk ARAC
RAPCON	Radar Approach Control Facility
TRACON	Terminal Radar Approach Control
SUA	Special Use Airspace
UTBNI	Up to, but not including
VFR	Visual Flight Rules

Figure A5.14. PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA/ATCAAS. (Page 2).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; FORT POLK ARAC, FORT POLK, LOUISIANA; FORT WORTH ARTC CENTER; AND LAKE CHARLES TRACON LETTER OF AGREEMENT, SUBJECT: PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA / ATCAAS, EFFECTIVE: 03/01/18

5. **SCHEDULING.**

a. The Scheduling Authority for the SUA defined herein is the AT & A Officer, Fort Polk, Louisiana. The Alternate Scheduling Authority is Fort Polk ARAC.

NOTE: JRTC will de-conflict use of the WARRIOR ATCAA and CADDO ATCAA through scheduling. WARRIOR MOA and CADDO ATCAA may be used simultaneously.

b. The Scheduling Authority must submit requested schedules as follows.

(1) Forward the requested schedule to the Houston Center MAC by 1630 Local on the day prior to intended use via the MADE System. Follow-up with a phone call to the MAC (281-230-5563) to verify information.

(2) If MADE is inoperable or cannot be accessed, schedule may be requested via facsimile (281-230-6260), followed by a phone call (281-230-5563) to verify receipt.

(3) Random requests by the scheduler may be honored on a case by case basis, conditions permitting.

(4) Requests must include the required altitude block and the timeframe necessary to accomplish the scheduled mission

(5) Approved airspace requests must be cancelled as soon as determination is made that airspace will not be used.

6. **RESPONSIBILITIES.**

b. Participating aircrews must:

(1) Adhere to the procedures in this agreement and remain within the confines of their assigned areas.

(2) Ensure MARSA is applied for participating aircraft operating in the WARRIOR MOA / ATCAAs, CADDO ATCAA, CLAIBORNE MOA / ATCAAs, R-3801, R-3803 and R-3804. MARSA must also apply between aircraft operating in different but adjacent SUA. Aircrews not familiar with MARSA separation must be provided with a pre-mission briefing on the specified separation criteria by the scheduling unit.

(3) Maintain direct two-way communication with Polk Approach at all times while operating in the WARRIOR MOA / ATCAAs.

c. Commander JRTC and Fort Polk must:

(1) Provide participating aircrews with a copy of this Letter of Agreement.

(2) Notifiy aircrews of the operational status of Polk Approach.

2

Figure A5.15. PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA/ATCAAS. (Page 3).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; FORT POLK ARAC, FORT POLK, LOUISIANA; FORT WORTH ARTC CENTER; AND LAKE CHARLES TRACON LETTER OF AGREEMENT, SUBJECT: PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA / ATCAAS, EFFECTIVE: 03/01/18

(3) Provide aircrews, not familiar with MARSA separation, a pre-mission briefing on the specified separation criteria.

d. Polk Approach must:

(1) Contact the Houston Center Polk-Low Sector ten (10) minutes prior to aircraft entry for release of the WARRIOR MOA / ATCAAs.

(2) Notify the Polk-Low Sector when the WARRIOR MOA / ATCAA use has been terminated and release the airspace back to Houston Center.

(3) Advise Lake Charles TRACON when WARRIOR MOA is activated and deactivated.

(4) Advise Fort Worth Center when WARRIOR MOA and / or ATCAA is activated and deactivated.

(5) Immediately advise the Polk-Low Sector whenever participating aircraft cannot remain within the boundaries of the allocated airspace.

e. Houston Center must:

(1) Provide the military with priority authorization for the use of the WARRIOR MOA / ATCAAs. The appropriate Center sector or the Houston Center MAC may recall or deny airspace when deemed necessary and provide Polk Approach with alternate use times. Airspace will normally be recalled or denied for the following reasons:

(a) Emergency conditions (national, aircraft, or facility).

(b) Severe weather conditions.

(c) Severe traffic congestion.

NOTE: Only the specific MOA / ATCAAs as depicted in ANNEX 1 that are impacted by emergency conditions, severe weather, or severe traffic will be recalled or denied. Consideration must also be given to the vertical stratification of the MOA / ATCAAs; i.e., deny/recall an ATCAA while still permitting MOA operations.

***EXAMPLE**: WARRIOR 3 ATCAA may be denied by the sector controller due to traffic congestion, while use of the WARRIOR 1 and 2 ATCAA is permitted.*

(d) Major equipment outages (i.e., radar, radio).

(2) Recall or deny requests for the WARRIOR MOA / ATCAAs when Polk Approach is not operational.

3

Figure A5.16. PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA/ATCAAS. (Page 4).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; FORT POLK ARAC, FORT POLK, LOUISIANA; FORT WORTH ARTC CENTER; AND LAKE CHARLES TRACON LETTER OF AGREEMENT, SUBJECT: PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA / ATCAAS, EFFECTIVE: 03/01/18

7. **PROCEDURES.**

a. General:

(1) Radar air traffic control services for aircraft operating within the WARRIOR MOA / ATCAAs will be provided by Polk Approach.

(2) All aircraft operating in the WARRIOR MOA / ATCAAs must have an operating transponder with Mode C.

(3) The appropriate Houston Center sector may request, and Polk Approach may approve, the transit of nonparticipating aircraft through active WARRIOR MOA / ATCAA airspace provided there is no significant impact to participating aircraft. Polk Approach must provide standard IFR separation in accordance with FAA JO 7110.65, Air Traffic Control, to nonparticipating aircraft in WARRIOR MOA / ATCAA airspace.

b. IFR entry into the WARRIOR MOAs:

(1) Entry into the WARRIOR MOAs may be accomplished VFR or on an IFR flight plan.

(2) Houston Center must effect a radar hand-off and transfer communications to Polk Approach prior to the aircraft entering the WARRIOR MOA / ATCAAs.

c. IFR exit from the WARRIOR MOA / ATCAAs:

(1) Aircraft requesting IFR exit from the WARRIOR MOA / ATCAAs must have an IFR flight plan on file and contact Polk Approach for clearance five (5) minutes prior to exit.

(2) Polk Approach must contain the aircraft within WARRIOR MOA / ATCAA airspace until a radar hand-off is effected.

d. VFR Entry/Exit.

(1) Participating aircraft entering the WARRIOR MOAs VFR must contact Polk Approach prior to entry and obtain approval to enter the MOAs.

(2) Participating VFR aircraft must notify Polk Approach upon exiting the WARRIOR MOAs on a frequency designated by Polk Approach.

7. **ATTACHMENT.**

a. ANNEX 1: WARRIOR MOA / ATCAAs.

4

Figure A5.17. PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA/ATCAAS. (Page 5).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; FORT POLK ARAC, FORT POLK, LOUISIANA; FORT WORTH ARTC CENTER; AND LAKE CHARLES TRACON LETTER OF AGREEMENT, SUBJECT: PROCEDURES FOR OPERATIONS IN THE WARRIOR MOA / ATCAAS, EFFECTIVE: 03/01/18

David Mullinax Digitally signed by David Mullinax Date: 2018.02.22 14:48:31 -06'00'

David Mullinax
Air Traffic Manager
Houston ARTC Center

Patrick D. Frank
Brigadier General, U.S. Army
Commanding
Fort Polk, Louisiana

WARD.KLANCY.LEE.1117839610 Digitally signed by WARD.KLANCY.LEE.1117839610 Date: 2018.02.26 08:30:17 -06'00'

Klancy L. Ward
Chief, Fort Polk ARAC
Fort Polk, Louisiana

JOHN T HENDRIX JR Digitally signed by JOHN T HENDRIX JR Date: 2018.02.23 08:33:45 -06'00'

John Hendrix
Air Traffic Manager
Lake Charles TRACON

TOMMY A GRAHAM JR Digitally signed by TOMMY A GRAHAM JR Date: 2018.02.26 15:16:17 -06'00'

Tommy A. Graham, Jr.
Air Traffic Manager
Fort Worth ARTC Center

MICHAEL D RIZZO Digitally signed by MICHAEL D RIZZO Date: 2018.02.23 09:31:51 -06'00'

Michael D. Rizzo
Air Traffic Representative
FAA, ATO Central Service Center

Figure A5.18. WARRIOR MOA/ATCAAS. ANNEX 1.

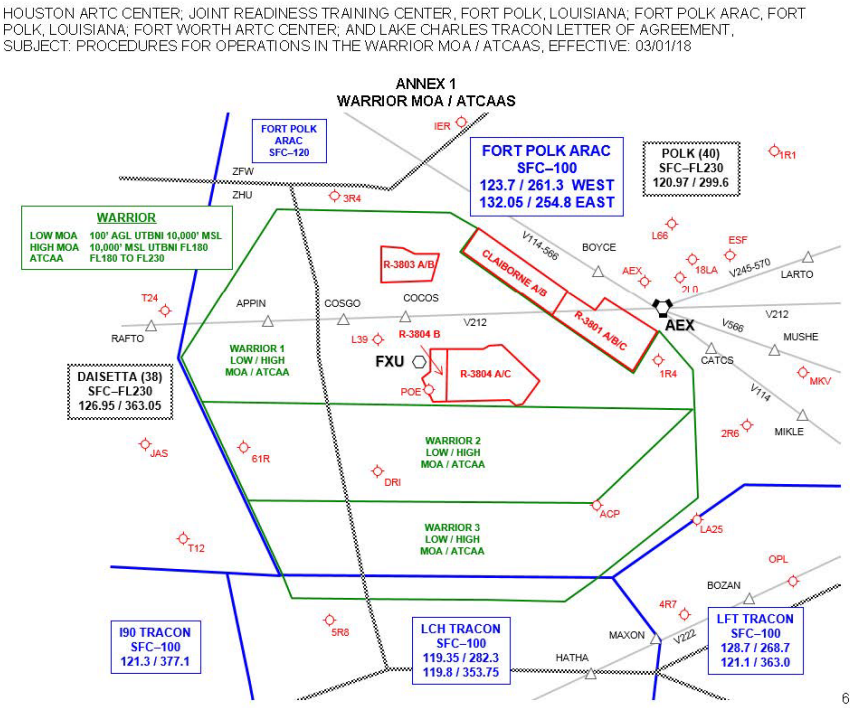


Figure A5.19. CADDO ATCAA PROCEDURES (Page 1).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA
LETTER OF AGREEMENT

EFFECTIVE: MAY 29, 2014

SUBJECT: CADDO ATCAA PROCEDURES

1. **PURPOSE.** The purpose of this agreement is to define and prescribe procedures and responsibilities to be used when conducting flight operations in the CADDO ATCAA.

2. **SCOPE.** The provisions of this agreement are applicable to all participating aircraft operating within the SUA defined herein.

3. **ABBREVIATIONS.**

AFB	Air Force Base
ARAC	Army Radar Approach Control
ARTC	Air Route Traffic Control
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
CENTER	Houston ARTC Center
COMM	Commercial
CTS	Combat Training Squadron
DSN	Defense Switched Network
FL	Flight Level
IAF	Initial Approach Fix
IAP	Instrument Approach Procedure
IFR	Instrument Flight Rules
JRTC	Joint Readiness Training Center
LOA	Letter of Agreement
MADE	Military Airspace Data Entry
MARSA	Military Authority Assumes Responsibility for Separation of Aircraft
MOA	Military Operations Area
NM	Nautical Mile
OSS	Operations Support Squadron
RTB	Return to Base
SUA	Special Use Airspace
TAS	True Airspeed
USA	United States Army
USAFR	United States Air Force Reserve
VFR	Visual Flight Rules

4. **SUA DEFINITION – CADDO ATCAA.**

   a. Boundaries: See ANNEX 1.

   b. Altitude: FL180 – FL230, or as assigned by ATC.

Figure A5.20. CADDO ATCAA PROCEDURES (Page 2).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA, LETTER OF AGREEMENT, SUBJECT: CADDO ATCAA PROCEDURES
EFFECTIVE: 05/29/14

5. **SCHEDULING.**

a. The Scheduling Authority for the CADDO ATCAA is the Joint Readiness Training Center, Fort Polk, Louisiana. The Alternate Scheduling Authority is Fort Polk Army Radar Approach Control.

b. The 93rd Bomb Squadron must forward the requested schedule to the JRTC by 1530 Local on the day prior to intended use. Weekend schedules must be forwarded on Fridays.

NOTE: JRTC will de-conflict use of the WARRIOR ATCAA and CADDO ATCAA through scheduling. WARRIOR MOA and CADDO ATCAA may be used simultaneously.

c. The Scheduling Authority must submit requested schedules as follows.

(1) Forward the requested schedule to the Center MAC by 1630 Local on the day prior to intended use via the MADE System. Follow-up with a phone call to the MAC (281-230-5563) to verify information.

(2) If MADE is inoperable or cannot be accessed, schedule may be requested via facsimile (281-230-6260), followed by a phone call (281-230-5563) to verify receipt.

(3) Random requests by the scheduler may be honored on a case by case basis, conditions permitting.

(4) Requests must include the required altitude block and the timeframe necessary to accomplish the scheduled mission.

(5) Approved airspace requests must be cancelled as soon as determination is made that airspace will not be used.

(6) When the ATCAA is scheduled by users that are not a party to this LOA, the Scheduling Authority must provide them a copy of this agreement.

d. Units scheduling the CADDO ATCAA may also schedule R-3801C and the CLAIBORNE ATCAA for additional airspace. To do so they must contact the 307th OSS scheduling office at DSN 331-3171 or COMM 318-529-3171.

6. **GENERAL.**

a. "Participating Aircraft" are defined as those aircraft assigned and operating within the SUA defined herein.

b. MARSA must apply between all participating aircraft assigned and operating in the SUA defined herein. MARSA must also apply between aircraft operating in the WARRIOR MOA and CADDO ATCAA.

2

Figure A5.21. CADDO ATCAA PROCEDURES (Page 3).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA, LETTER OF AGREEMENT, SUBJECT: CADDO ATCAA PROCEDURES
EFFECTIVE: 05/29/14

c. The appropriate Houston Center sector may request, and Polk ARAC may approve, the transit of nonparticipating aircraft through active CADDO ATCAA airspace provided there is no significant impact to participating aircraft. Polk ARAC must provide standard IFR separation in accordance with FAA Order 7110.65 to nonparticipating aircraft in CADDO ATCAA airspace.

d. Recall/Denial of MOAs/ATCAAs.

(1) Center must provide participating aircraft priority of use of the CADDOATCAA under normal conditions. CADDO ATCAA will be recalled or denied only for the following reasons.

(a) Emergency conditions (national, aircraft, or facility).

(b) Severe weather conditions.

(c) When equipment outage (i.e., radar, radio, etc.) adversely affect air safety.

(d) Severe traffic congestion.

e. Radio Failure Procedures.

(a) An aircraft experiencing communications failure while operating within CADDO shall squawk Code 7700 for 1 minute, then squawk and remain on Code 7600.

(b) Weather conditions permitting, flights will return VFR.

(c) If weather precludes a VFR return, maintain last assigned altitude, and proceed direct to BARGS IAF. Descend in holding to 12,000 feet MSL, and execute the IAP for the active runway at Barksdale AFB.

7. **PROCEDURES.**

a. Participating aircraft must:

(1) Remain within the lateral and vertical boundaries of the assigned SUA.

(2) Squawk the assigned Mode 3 discrete code.

(3) Advise Polk ARAC at least five minutes prior to exit when ready to RTB.

(4) For Electronic Warfare Training, contact CLAIBORNE Range Control Officer or "Medicine Man" on UHF primary 298.6, secondary 268.1.

Figure A5.22. CADDO ATCAA PROCEDURES (Page 4).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA, LETTER OF AGREEMENT, SUBJECT: CADDO ATCAA PROCEDURES
EFFECTIVE: 05/29/14

b. Polk ARAC must:

(1) Maintain radar and radio surveillance of aircraft in CADDO ATCAA.

(2) Immediately advise the appropriate Houston Center sector whenever participating aircraft cannot remain within the boundaries of the allocated airspace.

(3) Contain the aircraft within CADDO ATCAA airspace until a radar hand-off is effected prior to exit.

c. Houston Center must effect a radar hand-off and transfer communications to Polk ARAC prior to the aircraft entering the CADDO ATCAA.

d. Aircraft will normally be recovered with a VFR or en route descent via the filed flight plan.

8. **ATTACHMENTS.**

a. ANNEX 1: CADDO ATCAA.

4

Figure A5.23. CADDO ATCAA PROCEDURES (Page 5).

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA, LETTER OF AGREEMENT, SUBJECT: CADDO ATCAA PROCEDURES
EFFECTIVE: 05/29/14

Jim D'Ambrosio
Air Traffic Manager
Houston ARTC Center

T. Glenn Moore
Colonel, USA
Commander, U.S. Army Garrison
JRTC and Fort Polk, Fort Polk, Louisiana
MAY 0 8 2014

Jonathan M. Ellis
Colonel, USAFR
Commander, 307th Bomb Wing
Barksdale AFB, Louisiana

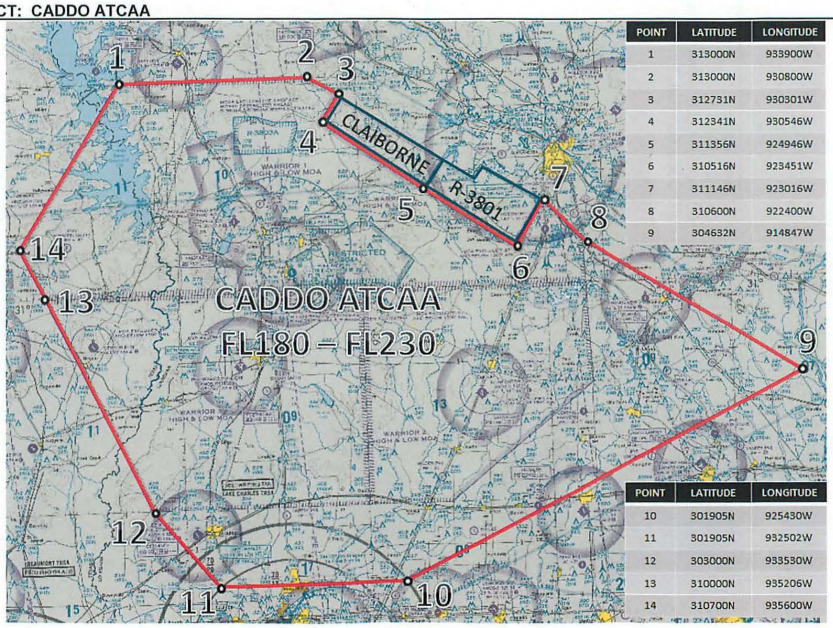
5

Figure A5.24. CADDO ATCAA ANNEX 1.

HOUSTON ARTC CENTER; JOINT READINESS TRAINING CENTER, FORT POLK, LOUISIANA; AND 93RD BOMB SQUADRON, BARKSDALE AFB, LOUISIANA, LETTER OF AGREEMENT, SUBJECT: CADDO ATCAA PROCEDURES
EFFECTIVE: 05/29/14

ANNEX 1

SUBJECT: CADDO ATCAA



POINT	LATITUDE	LONGITUDE
1	313000N	933900W
2	313000N	930800W
3	312731N	930301W
4	312341N	930546W
5	311356N	924946W
6	310516N	923451W
7	311146N	923016W
8	310600N	922400W
9	304632N	914847W

POINT	LATITUDE	LONGITUDE
10	301905N	925430W
11	301905N	932502W
12	303000N	933530W
13	310000N	935206W
14	310700N	935600W

6

Attachment 6
CLAIBORNE RANGE TARGET LISTS
Table A6.1. Inert-Authorized Target Coordinates.

(For targets with multiple DPIs, the listed coordinates are set for the center of the target array.)			
TARGET	**UTM – 15R WQ**	**LAT / LONG**	**ELEVATION**
CONV CIRCLE	**34157 50045**	**N3111.038 W09238.491**	**200’**
ROCKET CIRCLE	**33985 49822**	**N3110.307 W09238.600**	**167’**
CENTER TAC	**34186 50224**	**N3111.134 W09238.473**	**201’**
EAST TAC	**34382 50025**	**N3111.027 W09238.350**	**199’**
WEST TAC	**33967 50104**	**N3111.070 W09238.611**	**200’**
NIGHT TAC	**33962 49666**	**N3110.833 W09238.615**	**181’**
SOUTH TAC	**33847 49607**	**N3110.801 W09238.687**	**174’**
MULTI-STRAFE	**33589 49861**	**N3110.939 W09238.849**	**203’**
STRAFE PITS 1-4	**35238 49425**	**N3110.700 W09237.812**	**179’**

Table A6.2. Dry-Only Target Coordinates.

(For targets with multiple DPIs, the listed coordinates are set for the center of the target array.)			
TARGET AREA	**UTM – 15R WQ**	**LAT / LONG**	**ELEVATION**
URBAN VILLAGE	**34378 50333**	**N3111.193 W09238.352**	**187’**
AIRFIELD	**34167 50430**	**N3111.246 W09238.484**	**190’**
SA6	**33707 49530**	**N3110.759 W09238.775**	**198’**
APC	**33607 49543**	**N3110.767 W09238.838**	**186’**

F-4	34260 50637	N3111.358 W09238.424	184’
M-6 TANK	34363 50281	N3111.165 W09238.361	194’
M-6 TANK	34585 50356	N3111.205 W09238.221	184’
HEATED TANK	34940 49961	N3110.990 W09237.999	184’

Figure A6.1. Legend: Blue – Non Targets; Green- Dry Only, Laser Approved; Orange – Inert, Dry, and Laser Approved.

Attachment 7
APPROVED AIR-TO-GROUND INERT TARGETS
Table A7.1. AH-64 Events, Expanded Boundary.

AH-64 Event	ID Ref	Auth Weapon	Release Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Fixed Gun/ Helo Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
Dive Strafe		30MM M788	-60° to -10°	200' to 1.5K	0-120	135°						X				Release range 500 - 2100m
Hover Strafe		30MM M788	-60° to -10°	200' to 1.5K	0	120° to 150°						X				Release range 500 - 2000m
Run LA Strafe		30MM M788	-10° to 0°	500' to 1.5K	0-120	135°						X				Release range 700 - 3000m
Dive Strafe		30MM M788	-60° to -20°	200' to 1.5K	0-120	220° to 235°						X				Release range 500 - 1200m
Hover Strafe		30MM M788	-60° to -20°	200' to 1.5K	0	210° to 240°						X				Release range 500 - 1200m
Dive Strafe		30MM M788	-60° to -15°	200' to 1.5K	0-120	310° to 325°						X				Release range 500 - 1600m
Hover Strafe		30MM M788	-60° to -15°	200' to 1.5K	0	320°						X				Release range 500 - 1500m
Dive Rocket		M151 TP 2.75 Rx	-30° to -10°	500' to 2.5K	0-120	130°						X				Release range 500 - 3100m
						220°						X				
						310°						X				
Hover Rocket		M151 TP 2.75 Rx	-30° to 0°	10' to 1.5K	0	125° to 150°						X				Release range 1500 - 3500m
						205° to 235°						X				Release range 2000 - 3500m
						310°						X				Release range 1500 - 3500m
Run Rocket		M151 TP 2.75 Rx	-10° to 0°	500' to 1.0K	0-120	130°						X				Release range 700 - 3700m
						220°						X				
						310°						X				
All attack headings are ±10° for all aircraft except where specifically noted.																

Table A7.2. A-10 Events, Expanded Boundary (Page 1 of 3).

A-10 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
HARB	18	BDU-33	-60° to 5°	10.0K to 20.0K	200-400	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
HADB	10	BDU-33	-60° to -30°	4.5K to 10.0K	350-450	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	12	BDU-50 CF	-60° to -30°	4.5K to 10.0K	350-450	125°				X6			X6			
						215°				X6			X6			
						310°				X6			X6			
MAT	47	BDU-33	-45° to 5°	5.0K to 15.0K	250-350	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	50	BDU-50 CF	-45° to 5°	10.0K to 15.0K	250-450	125°				X6			X6			
						215°				X6			X6			
						310°				X6			X6			
LAT	37	BDU-33	-45° to 5°	1.0K to 10.0K	250-450	125°	X6	X6	X	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	39	BDU-50 CF	-45° to 5°	1.0K to 10.0K	250-400	125°				X6			X6			
						215°				X6			X6			
						310°				X6			X6			
DB	307	BDU-33	-35° to -25°	1.5K to 10.0K	300-400	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	8	BDU-50 CF	-40° to -30°	1.5K to 10.0K	300-400	125°				X6			X6			
						215°				X6			X6			
						310°				X6			X6			

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.3. A-10 Events, Expanded Boundary (Page 2 of 3).

A-10 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
HAS	20	30MM	-60° to -30°	1.5K to 15.0K	250-450	125°,310°				X		X		X		
	21	30MM	-45° to -30°	1.0K to 8.0K	250-450	125°				X		X		X	X*	#4 pit only
						310°				X		X		X		
LAS	36	30MM	-30° to 0°	75' to 3.0K	200-450	125°				X		X		X	X*	#1-3 pits only
						310°				X		X				
LRS	46	30MM	-15° to 0°	75' to 2.0K	200-400	125°				X		X		X	X*	NET abeam flank tower #1-3 pits only
TTS	56	30MM	-20° to 0°	75' to 2.0K	200-400	125°				X				X	X*	#1-3 pits only
Level	57	BDU-33	-5° to 5°	300' to 15.0K	200-350	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	59	BDU-50 CF	-5° to 5°	300' to 15.0K	200-350	125°				X6			X6			
						215°				X6			X			
						310°				X6			X6			
LALD	31	BDU-33	-30° to -10°	1.0K to 10.0K	250-400	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	33	BDU-50 CF	-30° to -10°	1.0K to 10.0K	250-400	125°				X6			X6			
						215°				X6			X6			
						310°				X6			X6			
LAHD	26	BDU-33	-30° to 0°	300' to 3.0K	250-350	125°	X6	X6	X6	X6	X6	X6				
						215°	X6	X6	X6	X6	X6	X6				
						310°	X6	X6	X6	X6	X6	X6				
	28	BDU-50HD Air	-30° to 0°	300' to 5.0K	250-350	125°				X6			X6			
						215°				X6			X			
						310°				X6			X6			
All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.																

Table A7.4. A-10 Events, Expanded Boundary (Page 3 of 3).

A-10 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
HAR/ HATR/ HARR	14	TP 2.75 Rx	-60° to -30°	1.0K to 15.0K	250-450	125°						X				
						215°						X				
						310°						X				
HATR/ HARR	22	TP 2.75 Rx	-35° to 5°	4.0K to 15.0K	250-450	125°						X				
						310°						X				
LAR	35	TP 2.75 Rx	-35° to 5°	100' to 5.0K	250-350	125°						X				
						215°						X				
						310°						X				
LATR	41	TP 2.75 Rx	-25° to 5°	1.0K to 5.0K	200-350	125°						X				
						215°						X				
						310°						X				
VLRS	46S1	30MM TP	-60° to 0°	2.0K to 25.0 K	250-450	125°				X		X			X*	Left turns Strafe Pits -45° to 0°
						310°				X		X				Right turns
VLRS- Aircraft must be inside the expanded boundary before strafing, on the 125 hdg. This occurs when passing over Hwy 488.																

Table A7.5. B-52 Events, Expanded Boundary.

B-52 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
Level High Drag	124	BDU-50 HD	0°	300' to 5.0K	325-450	125°				X6			X6			
Level Radar Low	125	BDU-50 CF	0°	500' to 5.0K	300-420	125° 310°				X6			X6			
Level Radar High	128	BDU-50 CF	0°	5.0K to 23.0K	300-480	125° 310°				X6			X6			
All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.																

Table A7.6. F-15 Events, Expanded Boundary (Page 1 of 2).

F-15 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
DB	141	BDU-33	-45° to -30°	3.5K to 5.0K	400-500	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
LALD	143	BDU-33	-20° to -15°	1.7K to 2.5K	400-500	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
HADB	175	BDU-33	-50° to -30°	4.5K to 10.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
	177	BDU-50 CF	-50° to -30°	4.5K to 10.0K	350-550	125°				X			X			
						310°				X			X			
HARB	179	BDU-33	-50° to -30°	10.0K to 20.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
LAHD	184	BDU-33	-30° to 0°	300' to 2.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
	186	BDU-50 Air	-30° to 0°	300' to 2.0K	350-550	125°				X			X			
VLD	219	BDU-33	-5° to 5°	5.0K to 23.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
	220	BDU-33	-5° to 5°	300' to 5.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.																

Table A7.7. F-15 Events, Expanded Boundary (Page 2 of 2).

F-15 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
VLD	222	MK-106	-5° to 5°	300' to 2.0K	350-550	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
HAS	183	20MM PGU 27	-60° to -30°	1.5K to 10.0K	350-550	125°				X		X		X	X*	#4 pit only, -45° to -30°
						215°				X		X				
						310°				X		X		X		
LAS		20MM PGU 27	-30° to -5°	500' to 5.0K	300-550	125°								X	X*	#1-3 only

Table A7.8. F-16 Events, Expanded Boundary (Page 1 of 3).

F-16 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
HADB	175	BDU-33	-50° to -30°	4.5K to 10.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
	177	BDU-50 CF	-50° to -30°	4.5K to 10.0K	350-550	125°				X			X			
						310°				X			X			
HARB	179	BDU-33	-50° to -30°	10.0K to 20.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
LAHD	184	BDU-33	-30° to 0°	300' to 2.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.9. F-16 Events, Expanded Boundary (Page 2 of 3).

F-16 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
LAHD	186	BDU-50 Air	-30° to 0°	300' to 2.0K	350-550	125°				X			X			
VLD	219	BDU-33	-5° to 5°	5.0K to 23.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
VLD	220	BDU-33	-5° to 5°	300' to 5.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
VLD	222	MK-106	-5° to 5°	300' to 2.0K	350-550	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
VLD		BDU-50 CF	-5° to 5°	2.0K to 23.0K	350-450	125°				X			X			
						310°				X			X			
DB	149	BDU-33	-35° to 0°	2.0K to 10.0 K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X	X	X				
DB	152	BDU-50 CF	-35° to -10°	1.5K to 10.0K	350-550	125°				X			X			
						310°				X			X			
HADB		BDU-56 CF	-60° to -20°	1.5K to 10.0K	350-550	125°				X			X			
						310°				X			X			
LADB		BDU-56 CF	-30° to -10°	2.0K to 5.0K	350-500	125°				X			X			
						310°				X			X			
HADB		BDU-61 CF	-60° to -15°	1.5K to 10.0K	350-550	125°				X			X			
						310°				X			X			

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.10. F-16 Events, Expanded Boundary (Page 3 of 3).

F-16 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
DB		GBU-12	-30° to -5°	1.5K to 12.0K	350-500	310°				X						
DB		GBU-10	-30° to -5°	1.5K to 10.0K	350-500	125°				X						
						310°				X						
LRDT	164	BDU33	-60° to 30°	300' to 15.0K	350-550	125°	X	X	X	X	X	X				
						215°	X	X	X	X	X	X				
						315°	X	X	X	X	X	X				
HAS	183	20MM PGU27	-50° to -20°	1.5K to 10.0K	350-550	125°				X		X		X	X*	#4 pit only -45° to -20°
						310°				X		X		X		
LAS	160	20MM PGU27	-20° to 0°	300' to 2.5K	350-550	125°				X		X		X	X*	#1-3 pit only

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.11. B-1 Events, Expanded Range.

B-1 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
Level	124	BDU-33	0°	300' to 2.0K	350-600	125° 310°	X6	X	X	X6	X6	X6				
Level	125	BDU-50 CF	0°	4.0K to 15.0K	350-600	125° 310°				X6			X6			
Level	128	BDU-50 CF	0°	15.0K to 23.0K	350-600	125° 310°				X6			X6			

Table A7.12. F-18 Events, Expanded Boundary (Page 1 of 2).

F-18 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks*
DB	8	MK-76	-60° to -10°	1.0K to 18.0K	350-600	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
Loft	10	MK-76	5° to 30°	500' to 25.0K	350-600	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
Low Angle DB	13	MK-76	-20° to 0°	500' to 10.0K	350-550	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
LEVEL		MK-76	-5° to 5°	500' to 5.0K	350-550	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
LEVEL		MK-76	-5° to 5°	5.0K to 23.0K	350-600	125°	X	X	X	X	X					
						215°	X	X	X	X	X					
						310°	X	X	X	X	X					
DB	9	BDU-45 CF	-60° to -10°	3.0K to 20.0K	350-600	125°				X			X			
						215°				X			X			
						310°				X			X			
LADB		BDU-45 CF	-20° to 0°	500' to 5.0K	350-550	125°				X			X			
LEVEL		BDU-45 CF	-5° to 5°	5.0K to 20.0K	350-600	125°				X			X			
						215°				X			X			
						310°				X			X			

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.13. F-18 Events, Expanded Boundary (Page 2 of 2).

F-18 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
DB		GBU10	-30° to -5°	1.5K to 10.0K	350-500	125°				X						
						310°				X						
DB		GBU12	-30° to -5°	1.5K to 12.0K	350-500	310°				X						
LADB		BDU-61 CF	-20° to 0°	500' to 5.0K	350-550	125°				X			X			
DB		BDU-61 CF	-60° to -10°	3.0K to 20.0K	350-600	125°				X			X			
						310°				X			X			
LEVEL		BDU-61 CF	-5° to 5°	5.0K to 20.0K	350-600	125°				X			X			
						215°				X			X			
						310°				X			X			
HAS	16	20MM PGU27	-60° to -30°	1.5K to 10.0K	350-550	125°				X		X		X		#4 pit only -45° to -30°
						215°				X		X				
						310°				X		X		X		
LAS	15	20MM PGU27	-30° to 0°	500' to 3.5K	350-550	125°				X		X		X	X*	#1-3 Pits

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.14. A-10 Events, Restricted Boundary.

A-10 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
						125°	X	X	X	X		X				
HADB	10	BDU-33	-60° to -30°	4.5K to 10.0K	350-450	215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
						125°	X	X	X			X				
DB	307	BDU-33	-35° to -25°	1.5K to 10.0K	300-400	215°	X	X	X	X		X				
						310°	X		X	X						
						125°						X				
HAR	16	TP 2.75 RX	-45° to -30°	1.0K to 6.0K	250-350	215°						X				
						310°						X				
						125°	X	X	X			X				
LALD	31	BDU-33	-30° to -10°	1.0K to 10.0K	250-400	215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
						125°	X	X	X			X				
LAHD	33	BDU-33	-30° to 0°	300' to 3.0K	250-350	215°	X	X	X	X	X	X				
						310°	X		X							
						125°	X	X	X			X				
Level	57	BDU-33	-5° to 5°	300' to 15.0K	200-350	215°	X	X	X	X	X	X				
						310°	X		X	X						
						125°	X	X	X			X				
MAT		BDU-33	-45° to 5°	5.0K to 15.0K	250-350	215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
HADB		BDU-50	-60° to -30°	4.5K to 10.0K	350-450	215°				X						
						310°				X						
						125°				X		X				
HAS	21	30MM	-45° to -30°	1.0K to 10.0K	250-450	310°				X		X				

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.15. F-16 Events, Restricted Boundary.

F-16 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
DB	147	BDU-33	-35° to 0°	2.0K to 10.0K	350-550	125°	X	X	X			X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
Level	149	BDU-33	-5° to 5°	5.0K to 23.0K	350-550	125°	X	X	X		X	X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
HADB	175	BDU-33	-50° to -30°	4.5K to 10.0K	350-550	125°	X	X	X	X		X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
HARB	179	BDU-33	-50° to -30°	10.0K to 20.0K	350-550	125°	X	X	X	X		X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
LAHD	156	BDU-33	-30° to 0°	300' to 2.0K	350-550	125°	X	X	X			X				
						215°	X	X	X		X	X				
						310°			X							
HADB		BDU-50	-50° to -30°	4.5K to 10.0K	350-550	215°				X						
						310°				X						
HAS		20MM PGU27	-50° to -30°	1.5K to 6.2K	300-400	215°						X				
All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.																

Table A7.16. F-15 Events, Restricted Boundary.

F-15 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
DB	141	BDU-33	-45° to -30°	3.5K to 5.0K	400-500	125°	X	X	X			X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
HADB	175	BDU-33	-50° to -30°	4.5K to 10.0K	350-550	125°	X	X	X	X		X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
HARB		BDU-33	-50° to -30°	10.0K to 20.0K	350-550	125°	X	X	X	X		X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
LAHD		BDU33	-30° to 0°	300' to 2.0K	350-550	125°	X	X	X							
						215°	X	X	X		X	X				
						310°			X							
LALD		BDU-33	-20° to -15°	1.7K to 2.5K	400-500	125°	X	X	X			X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
LEVEL		BDU-33	-5° to 5°	5.0K to 23.0K	350-550	125°	X	X	X			X				
						215°	X	X	X	X	X	X				
						310°	X	X	X	X		X				
LEVEL		MK-106	-5° to 5°	300' to 2.0K	350-550	125°	X	X	X							
						215°	X	X	X	X	X					
						310°	X	X	X	X						
HAS		20MM PGU 27	-50° to -30°	1.5K to 6.2K	300-400	215°						X				

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.17. F-18 Events, Restricted Boundary.

F-18 Event	ID Ref	Auth Weapon	Dive Angle	Release Altitude (AGL)	Release Airspeed (KTAS)	Auth Headings (Mag)	Authorized Targets									
							Conv Cir	Cntr Tac	East Tac	Night Tac	West Tac	Rx Cir	South Tac	Multi Strafe	Strafe #1- #4	Remarks
LADB		MK-76	-20° to 0°	500' to 10.0K	350-550	125°	X	X	X							
						215°	X	X	X							
						310°			X							
LEVEL		MK-76	-5° to 5°	5.0K to 23.0K	350-600	125°	X	X	X							
						215°	X	X	X	X	X					
						310°	X	X	X	X						
LOFT		MK-76	5° to 30°	500' to 23.0K	350-600	125°	X	X	X							
						215°	X	X	X	X	X					
						310°	X		X	X						
DB		BDU-45	-50° to -30°	1.5K to 8.0K	300-400	215°				X						
						310°				X						
LEVEL		BDU-45	-5° to 5°	4.0K to 15.0K	300-550	215°				X						
HAS		20MM PGU27	-50° to -35°	1.0K to 4.7K	300-400	125°						X				
						215°				X		X				
						310°				X		X				

All attack headings are ±10° for all aircraft except where specifically noted. A 5 for ±5° will be used instead of an "X". Threat reactions may occur after release. "X6" – Ripple 6 or less authorized. Stick length is 400' or less with center of stick on target.

Table A7.18. ACRONYMS.

ACRONYMS
Dive Bomb (DB).
High Angle Dive Bomb (HADB).
High Angle Rocket (HAR).
High Altitude Release Bomb (HARB).
High Angle Release Rocket (HARR).
High Angle Strafe (HAS).
High Altitude Tactical Rocket (HATR).
Hard Target Strafe (HTS).
Low Altitude Toss (LAT).
Low Angle Dive Bomb (LADB).
Low Angle Low Drag (LALD).
Low Angle High Drag (LAHD).
Low Angle Rocket (LAR).
Low Angle Strafe (LAS).
Low Altitude Tactical Rocket (LATR).
Laser Guided Bomb (LGB).
Long Range Dive Toss (LRDT).
Long Range Strafe (LRS).
Medium Altitude Toss (MAT).
Medium Altitude Release Bomb (MARB).
Two Target Strafe (TTS).
Visual Level Delivery (VLD).
Very Long Range Strafe (VLRS).