

**Camp Gruber Joint Maneuver Training
Center- Heavy Regulation 385-1**

Safety

Camp Gruber Range and Training Facilities Safety Regulation



**Camp Gruber Joint Maneuver Training Center - Heavy
Oklahoma Army National Guard
Braggs, Oklahoma 74423-0029
1 May 2008**

This regulation supersedes OMD Regulation 385-1, Camp Gruber Range and Training Facilities Safety Regulation, dated 1 May 2007

UNCLASSIFIED

Summary of Change

CG JMTC-Heavy Reg 385-1
Camp Gruber Range and Training Facilities Safety Regulation

This revision

- Changes appendix A.
- Inserts new ranges added since last publication.
- Clarifies requirements for OIC's in chapter 2.
- Adds requirements and procedures for TADSS.
- Adds appendix I.

**Headquarters
Oklahoma Military Department
Oklahoma City, OK
1 May 2008**

***CG Regulation 385-1**

**Safety
Camp Gruber Range and Training Facilities Safety Regulation**

By Order of the Commander: JOEL P. WARD COL, IN, OKARNG Commander Official: JOEL M. POTTS LTC, IN, OKARNG Chief, Plans and Training Division	Summary. This regulation provides Commanders and using units with required force protection guidance when utilizing ranges and Training Facilities on Camp Gruber. It provides procedures to protect military and civilian personnel who are utilizing Camp Gruber for training. Applicability. The procedures in this Regulation applies to all military (AC/RC) and civilian agencies utilizing any facility on Camp Gruber. Impact on Army Manning System. This regulation does not contain any information that effects the OKARNG full time manning system.	Army Management Control Process. This regulation is subject to the requirements of AR 11-2. Supplementation. Supplementation of this regulation is prohibited without approval from the post range officer. Suggested Improvements. Users are encouraged to send comments and suggested improvements on DA2028 (Recommended Changes to Pubs and Blank Forms) directly to Camp Gruber Training Center. Distribution. A
---	---	--

Contents (Listed by paragraph and page number)

Chapter 1

General, page 1

Purpose • 1-1, *page 1*
Responsibilities • 1-2, *page 1*
Scheduling of training facilities • 1-3, *page 1*
Daily range coordination meeting • 1-4, *page 1*
Additions/cancellations of training facilities • 1-5, *page 1*
Control of airspace • 1-6, *page 2*
Issue of maps • 1-7, *page 2*
Environmental awareness and protection • 1-8, *page 2*
Alcohol policy • 1-9, *page 2*
Privately owned vehicles (POVs) • 1-10, *page 2*
Fire prevention • 1-11, *page 3*
Training facility clearance procedures • 1-12, *page 3*
Training facility phone numbers • 1-13, *page 4*

Chapter 2

Safety, page 5

General • 2-1, *page 5*
Officer in Charge (OIC)/Safety Officer (SO) requirements • 2-2, *page 5*
Certification of Officer in Charge/Safety Officer • 2-3, *page 5*
Decertification of OIC/SO • 2-4, *page 5*
Communications • 2-5, *page 5*
Documents/equipment required at training facilities • 2-6, *page 6*
Protective headgear and ear protection • 2-7, *page 6*
Medical requirements • 2-8, *page 6*
Medical emergency procedures • 2-9, *page 6*
Handling of ammunition on ranges • 2-10, *page 7*
Field storage of ammunition • 2-11, *page 7*
Ammunition Holding Area (AHA) Procedures • 2-12, *page 7*
Misfire and malfunction procedures • 2-13, *page 8*
Unexploded ordnance (UXO) • 2-14, *page 8*
Clearing of weapons • 2-15, *page 9*
Erratic firing • 2-16, *page 9*
Cease-fire procedures • 2-17, *page 9*
Maneuver Area Training • 2-18, *page 9*
Restricted and Off-limits areas • 2-19, *page 10*

*This regulation supersedes OMDR 385-1, Camp Gruber Range and Training Facilities Safety Regulation, dated 1 May 2007

Wildlife management • 2-20, *page 10*
Vehicular operations and movement • 2-21, *page 10*
Ranges available at Camp Gruber • 2-22, *page 12*
Range safety requirements • 2-23, *page 13*
Range operations • 2-24, *page 13*
Ammunition and pyrotechnics • 2-25, *page 13*
Explosive/Blasting operations • 2-26, *page 13*
Collective live-fire ranges • 2-27, *page 14*
Aviation/Airborne operations • 2-28, *page 14*
Smoke operations • 2-29, *page 14*
Urban Operations (UO) facilities • 2-30, *page 15*
Air Assault Obstacle Course • 2-31, *page 15*
NBC Chamber • 2-32, *page 15*
Use of CS and riot control agents (RCAs) • 2-33, *page 15*
Engineer rock crusher-screening plant site • 2-34, *page 15*
Land Navigation Courses (TA 200 and EIB) • 2-35, *page 16*
Formations and Roadway Movements • 2-36, *page 16*
Risk Management • 2-37, *page 16*

Chapter 3

TADSS, *page 17*
General • 3-1, *page 17*
TADSS Items Available • 3-2, *page 17*
Other Training Equipment • 3-3, *page 17*
Requesting Use of TADSS • 3-4, *page 18*

Appendixes

A. Range and Training Facilities, *page A-1*
B. Situation Report, *page B-1*
C. Barriers, *page C-1*
D. Risk Management, *page D-1*
E. Range/Training Area/Demolition opening/closing procedures, *page E-1*
F. Commander's certification memorandum, *page F-1*
G. Range OIC/Safety/Medical requirements, *page G-1*
H. Civilian Medical Facilities, *page H-1*
I. Live Fire Checklist, *page I-1*

Table List

Table 2-1, Vehicle Speed Limits, *page 10*
Table B-1, Situation Report, *page B-1*
Table G-1, Minimum Officer in Charge (OIC), Safety Officer, and Medical Requirements, *page G-1*

Figure List

Figure D-1, DA Form 7566/ Composite Risk Management Worksheet, *page D-2*
Figure E-1, Range Opening/Closing Checklist, *page E-1*
Figure E-2, Non-live Fire Range Opening/Closing Checklist, *page E-2*
Figure E-3, Demo Range Opening/Closing Checklist, *page E-3*
Figure F-1, Commander's Certification Memorandum, *page F-1*
Figure H-1, Hospital Strip Map, *page H-1*
Figure I-1, Collective Live Fire Checklist, *page I-1*

Chapter 1 General

1-1. Purpose

This regulation governs the safe use of training facilities and areas located at Camp Gruber, Oklahoma. It is intended to supplement current training publications and regulations. The Muskogee County portion of Camp Gruber provides 33,027 acres of terrain for military training. Additional terrain for dismounted operations is available through a cooperative agreement with the Oklahoma Department of Wildlife Conservation.

1-2. Responsibilities

a. The Chief Plans and Training Division is responsible for all aspects of training at Camp Gruber. This individual, or an authorized representative, are the only agents who may approve exceptions to policy established by this regulation.

b. Plans and Operations Officer: Primarily responsible for scheduling the utilization of training facilities for the installation.

c. Range Officer: Responsible for the enforcement of policies and procedures established by this regulation.

1-3. Scheduling of training facilities

a. Scheduling of ranges and training areas will be IAW Camp Gruber Regulation (CGR) 210-1.

b. Information concerning the availability of training facilities can be accomplished telephonically; however, training facilities are scheduled and reserved only after a written request has been received. The Range Facility Management Support System-RFMSS program is the primary means for requesting and scheduling resources at Camp Gruber for all OKARNG units. Organizations may request RFMSS passwords from the Operations & Training Section. Passwords will be issued by the RFMSS administrator.

c. Cancellation of training facilities previously approved may be initially accomplished telephonically, but requires written documentation.

1-4. Daily range coordination meeting

a. A range coordination meeting is conducted daily at 0830, Bldg. 740.

b. The purpose of this meeting is to conduct final coordination for facilities that will be utilized on the training site over the next 24-hour period.

c. Units are required to provide a representative to this briefing to accomplish the following:

(1) Add or cancel ranges/facilities.

(2) Coordinate with other units to transfer scheduled facilities or to arrange for joint utilization.

(3) To receive information on installation directed cease-fires, safety precautions or administrative information of interest to all training units.

(4) To turn in daily unit Situation Report (SitRep) IAW Appendix B.

d. Units conducting training who are unable to attend the daily range coordination meeting must coordinate the above requirements prior to this event.

e. After being issued Buildings/ Quarters, Units will call Range Control at #6041 and provide Range Control with the following information: POC's; CQ's; Buildings occupied; and OIC.

1-5. Additions/cancellations of training facilities

- a. Additional training facilities may be acquired in the following manner:
 - (1) Provide a RFMSS (OKARNG units) or written request IAW CGR 210-1.
 - (2) Request the facility at the daily range briefing.
 - (3) Request a facility from another unit currently scheduled for the facility.
 - (4) Coordinate for joint utilization with another unit. The unit scheduled for the range will be responsible for clearance of the range.
- b. Units may cancel facilities prior to 48 hours before the day of training by notifying the Operations Section in writing.

1-6. Control of airspace

- a. Camp Gruber's airspace is controlled at the installation level by activating and deactivating a Controlled Firing Area (CFA). The Chief, Plans and Training Division/Range Control are the only agencies allowed to activate or deactivate the CFA. The level of restricted airspace that is activated is dependent on the weapons systems being fired on various range facilities within the installation.
- b. All scheduled aircraft or aircraft supporting ground elements must coordinate with Range Control (VHF 122.850, FM 40.80 -- or alternate 31.30) prior to entering the restricted area. Minimum information required is:
 - (1) Aircraft call sign or tail number.
 - (2) Estimated time of arrival.
 - (3) Estimated time on station.
 - (4) Number of personnel on the aircraft.
 - (5) Type of aircraft.
- c. Firing will not be conducted when the ceiling (cloud height) is less than 305 meters (1000') above maximum ordinate of fire. No projectiles shall enter a cloud formation. Visibility shall be sufficient to maintain surveillance of the entire CFA and for a distance of 5 miles from there in all directions. The range OIC is responsible for insuring that all firing is ceased prior to an aircraft entering the CFA airspace.

1-7. Issue of maps

- a. The current Camp Gruber training map is the Camp Gruber Special Military Installation Map, scale 1:50,000, Edition 2-30 ETB.
- b. Units may request maps through the Operations and Training Branch.

1-8. Environmental awareness and protection

- a. Environmental considerations and requirements are listed in OMDR 200-1.
- b. Foxholes, fighting position, etc. may be constructed only in authorized digging areas but will be filled in before the unit clears the training area.
- c. Hazardous Materials will not be disposed on any range, training or the cantonment area. Contact the agency that issued the materials for disposal instructions. All oil spills will be reported immediately to Range Control.

1-9. Alcohol policy

Alcoholic beverages are prohibited on all ranges, firing points, training areas and any other training facility at Camp Gruber. It is also illegal to transport alcoholic beverages along any installation road/trail leading to a training area or facility outside of the cantonment area.

1-10. Privately owned vehicles (POVs)

POVs are not authorized in the training areas. Units may request an exception to this policy from Range Control.

1-11. Fire prevention

a. Commanders will ensure all unit personnel are aware of fire hazards inherent in field training operations, to include the handling and firing of ammunition, fueling operations, open fires, etc. Except as noted below, units are responsible, within their capabilities, for extinguishing fires started either by their personnel or as a result of their unit training activity. Based on current fire hazard categories, unit personnel (Range OIC/Safety Officer) may hand receipt additional fire protection equipment for use on the range/facility.

b. General. Units will notify Range Control as soon as the fire is discovered. The report of the fire must include:

- (1) Nature and size.
- (2) Presence of ammunition or other explosive material, if any.
- (3) Location by 6-digit grid coordinates, or if in a remote area, location of a ground guide.

c. Range fires in the Impact Area. Range Control must be immediately notified of the location and extent of the fire. No personnel will remain downrange or move downrange without specific authorization from Range Control.

d. Fires in areas other than the Impact Area. Range Control must be immediately notified of the location and extent of the fire. Available personnel will attempt to extinguish or contain the fire if possible.

e. Fires Involving Ammunition and Explosives:

(1) Every reasonable attempt will be made to prevent fires from reaching ammunition and explosives storage areas.

(2) If it appears that a fire could extend into an area in where ammunition and explosives are stored, steps must immediately be taken by the senior service member present to evacuate such ammunition and explosives out of the fire area.

(3) Should a fire reach an ammunition and explosive storage areas, the senior service member present shall order the evacuation of all personnel to a safe distance from the storage area and post road guards as necessary to preclude entry of civilian and military traffic into the danger area. The senior service member present shall then notify Range Control of the measures taken.

f. Ammunition/Explosives/Pyrotechnic Suspension. When dry weather creates a fire hazard on the installation, Range Control may declare a suspension on the use of certain types of ammunition/explosives/pyrotechnics. Due to varying conditions, some items may be suspended while other types may be approved for use. The Range Officer or his designated representative will do this on a case-by-case basis.

g. Supplementary Information:

(1) Burning of trash is prohibited.

(2) Warming fires used to preclude cold weather injuries are permitted on a case-by-case basis only with prior approval of Range Control. Range Control personnel must be advised of the exact location of each fire. Unit commanders are responsible for safe use of warming fires.

1-12. Training facility clearance procedures

a. Units will be responsible for clearing all facilities they have receipted (drawn).

b. Clearance will be conducted during daylight and additional procedures (by Range) are listed in Appendix A and the specific Range/Facility Packet. When clearance is complete, the inspector will notify Range Control.

c. Inspectors will inspect facilities only until it becomes obvious that not enough preparation for clearance has taken place. In this case the inspector will brief the OIC of the deficiencies and depart.

d. Clearance of large units (battalion and higher) will be accomplished as follows:

(1) A Range Clearance Officer (RCO) in the rank of MSG or above will be appointed who will have the Commander's authority.

(2) At least 24 hours prior to clearance, the RCO will contact the Range Control NCOIC who will provide him a list of all facilities that must be cleared.

(3) On the day of clearance the RCO will report to Range Control and will assist in the clearance of the training areas/facilities. The RCO should have FM capability in order to communicate with subordinate elements in the training areas.

(4) Range Control personnel will coordinate only with the RCO on clearance problems and priorities of clearance.

1-13. Training facility phone numbers

Range Control	918-549- 6041	Building 740
Operations and Training	918-549- 6283	Building 119
Bldg Maintenance	918-549- 6072	Building 154
Security	918-549- 6021	Trailer 25
Warehouse	918-549- 6068	Building 327
Billeting	918-549- 6065	Building 117

Chapter 2 Safety

2-1. General

Safe training is the responsibility of the Unit/Organization Commander. This chapter provides specific safety guidelines for conducting training at Camp Gruber.

2-2. Officer in Charge (OIC)/Safety Officer (SO) requirements

Prior to conducting training on Camp Gruber, a commander certified OIC/SO must check in at Range Control, receive their required safety briefings, and present their certification memorandum to the Range Control staff for record. Specific OIC/SO requirements are listed in Appendix G.

2-3. Certification of Officer in Charge/Safety Officer

To be certified as an OIC or SO, two requirements must be met:

a. Commander's Certification. The first BN commander will provide a memo to Range Control in the format shown at Appendix F of those personnel who are certified to perform the duties as OIC or SO IAW this regulation and DA Pam 385-63. It is recommended that the Commander requires each OIC and SO to successfully complete a written examination which evaluates the individual's knowledge of DA Pam 385-63, applicable FMs for the subject weapon system and CGR 385-1. All officers/NCOs certified by the Command must be branch/MOS qualified for the type of training being conducted.

b. Safety Briefing. All OICs and SOs are required to receive a range safety briefing prior to range issue or occupation of the training areas/facilities.

2-4. Decertification of OIC/SO

a. OIC/SOs who violate, or allow for the violation of DA Pam 385-63, applicable FM safety standards or this regulation may be decertified.

b. Upon decertification, training will cease at the training facility until another certified officer is appointed.

c. Examples of safety violations, which may result in immediate decertification, are as follows:

- (1) OIC/SO not present on range or not in a position to control training being conducted.
- (2) No qualified medic or litter-bearing vehicle.
- (3) Unsafe handling or storage of ammunition or pyrotechnics.
- (4) Failure to establish and maintain communication with Range Control.
- (5) Road guards not posted or performing duties as required.
- (6) Damage, destruction or alteration of a training facility.
- (7) Failure to follow specified actions as described in the specific Range Facility Packet.

2-5. Communications

a. All units using Camp Gruber training facilities are required to maintain two types of communications with Range Control. The type of communication required is dependant on the facility being used and whether live firing is being conducted. Specific requirements are listed in Annex A for each training facility or range.

b. Some ranges contain single radio (FM) capability. Units are still required to provide the second type of communication (FM or cell phone) with range control from internal assets.

2-6. Documents/Equipment required at training facilities

The following documents must be present at all training facilities and must be readily accessible to the OIC:

- a. Range/Facility Packet (issued by Range Control).
- b. Field Manual and/or Technical Manual for the type of training being conducted or weapon being fired.
- c. If a medic is required on site, a strip map that shows the route to the nearest aid station, Camp Gruber Troop Medical Clinic (when operational) and Muskogee Regional Hospital (See Appendix H).
- d. A copy of this regulation (CGR 385-1).

2-7. Protective headgear and ear protection

- a. Commanders must ensure that all personnel conducting range/training operations use protective headgear and approved ear protection to ensure maximum precautions against injury and hearing loss.
- b. Personnel conducting operations are required to wear approved hearing protection for the respective hearing hazard zone. This zone is based on the largest hazard producing ammunition/explosive being utilized on the range. Specific distances are listed in Appendix A, and they are also listed in the specific FM for the weapon system being utilized.

2-8. Medical requirements

- a. A medical aid man/medic with the following capabilities and equipment must be present on all ranges/specified facilities during the conduct of live firing/training:
 - (1) The aid man must be MOS qualified. A civilian equivalent emergency medical technician is also authorized. Any exceptions to this policy must be submitted (in writing) to the Range Control Officer at least 7 days prior to conducting training. A Combat Lifesaver is not a substitute for a Combat Medic, or equivalent, present during Live Firing / Training.
 - (2) The aid man must have a standard aid bag and litter.
 - (3) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- b. A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient
- c. The driver must know the quickest route to:
 - (1) The unit's aid station, if any.
 - (2) Troop Medical Clinic, Camp Gruber (Bldg. 130), when operational.
 - (3) Local Hospital (Muskogee Regional Hospital).

2-9. Medical emergency procedures

- a. Requests for medical assistance should be sent by the fastest means possible to Range Control (ext. 6041/6043) or FM 40.80Mhz. If unable to contact Range Control, contact the Military Police/OMD Police Department at ext. 6021.
- b. For Helicopter Medical Evacuation, a landing zone should be marked with red smoke. In hours of darkness, vehicle headlights will be used to mark the landing zone, unless instructed otherwise. The coordinating frequency for medical evacuations is 40.80Mhz (primary) or 31.30Mhz (alternate). Any accident/incident involving medical evacuation to the Troop Medical Center (TMC) or to a civilian facility will be immediately reported to Range Control. OIC or senior medical person on site will determine if casualty requires air or ground evac. Medevac will be given in 9 line format.
- c. Wet bulb information. Range Control will publish current wet bulb status hourly over the primary FM frequencies when the heat is category two (GREEN) or above. Units within the cantonment area may contact Range Control for this information.

2-10. Handling of ammunition on ranges

Ammunition will be transported and handled only under the direct supervision of qualified personnel who are thoroughly familiar with the safety regulations listed in AR 385-63, DA Pam 385-63, DA Pam 385-64, TM 9-1300-206, FM 5-250 and the applicable field manual (FM) or technical manual (TM) for the weapon system or ammunition utilized.

a. No smoking is allowed within 50 feet of ammunition that is stored, being handled, or on the firing line. Troop concentrations will not be within 200 feet of ammunition storage or handling points.

b. OICs will ensure that NO ammunition, explosives, or components thereof, remain in the possession of any individual upon leaving the range.

c. The OIC of any training exercise involving the use of blank ammunition will conduct a safety briefing for all personnel prior to issue of ammunition.

d. Blank ammunition will only be issued to personnel with blank adapters mounted on their weapons.

e. Ammunition will not be stored or transported in the cantonment areas. Ammunition and explosives will enter/exit Camp Gruber through Gates 8/9 (Sicily Road/OK Highway 10).

2-11. Field storage of ammunition

a. Permission for overnight/field storage of ammunition, explosives, or components thereof, on ranges must be obtained from the Range Officer/NCOIC.

b. Guards must be posted at temporary field ammunition storage sites at all times. They must maintain primary (FM) and secondary communication with Range Control.

c. Ammunition and sensitive equipment will be guarded IAW AR 190-11 and AR 190-14.

d. All field storage of ammunition will be performed in accordance with DA Pam 385-64 and TM 9-1300-206.

2-12. Ammunition Holding Area (AHA) procedures

a. The ammunition holding area (AHA) is for temporary storage of ammunition, explosives and pyrotechnics for units utilizing the ranges and training areas of Camp Gruber. This facility consists of eleven storage magazines within a perimeter fence. All magazines are cleared for Hazard Classification 1.4 and below ammunition storage. Units using ammunition that is above the 1.4 hazard class must coordinate for specific 'approved' magazine before using the site. Range Control is the coordinating agency for use of this facility.

b. Issue:

(1) Units may request ammo magazines when requesting training areas IAW Camp Gruber Regulation 210-1.

(2) Units will provide a listing of authorized personnel who will be responsible for receipting the ammo magazine from Range Control during in processing. The unit Commander must authenticate the authorization memo.

(3) Units must provide Range Control with a copy of their DA 581 showing a listing of ammunition (by type/DODIC) prior to using the site.

c. Storage:

(1) Units will assume all security requirements (IAW AR 190-11) when utilizing the AHA.

(2) Only vehicles approved for transporting ammo/explosives will enter the AHA.

(3) Units are responsible for all accountability requirements (IAW DA Pam 710-2) while storing ammo/explosives in the AHA.

(4) Blank Ammunition will not be stored in the same container with live ammunition.

(5) Unit personnel (authorized access) will remain on post while ammunition is being stored in the AHA. They are responsible for informing Range Control of their location (for emergency contact) while on the installation.

2-13. Misfire and malfunction procedures

a. A misfire is a complete failure to fire. It is caused by a faulty firing mechanism or element in the propelling charge. AR 385-63 and appropriate FMs and TMs for the weapon(s) concerned give specific information on the proper method of handling misfires. Their guidance will be followed explicitly on all ranges and firing points.

b. In the event of a misfire that presents an immediate hazard to personnel or a cease-fire is necessary, the OIC is responsible to ensure:

- (1) All personnel are relocated to a safe distance from the incident.
- (2) Proper procedures are followed.
- (3) Range Control is notified to begin a malfunction investigation.
- (4) Technical assistance, if needed, may be requested from Range Control.

c. A misfire of a hand grenade is extremely dangerous; therefore, live hand grenades will not be thrown simultaneously. If there is a misfire, CEASE-FIRE immediately! Do not throw any more grenades. Observe the location of a grenade, evacuate personnel behind the safety berm and call Range Control.

d. Malfunctions:

(1) Material involved in malfunctions or accidents and any evidence (components, weapon/ammunition fragments) will be carefully preserved in the position and at the location it occupied at the time of the incident.

(2) Material involved in a class A or B accident (IAW AR 385-40) must remain on site until cleared by the investigating authority unless an immediate hazard to life or property is present.

(3) Damaged or malfunctioned guided missiles and rockets will be handled per the applicable TM and reported IAW AR 75-1.

(4) Notify Range Control to initiate the malfunction investigation. Notification will include the following:

- (a) Weapon system/ammunition involved.
- (b) Lot/Serial number of the ammunition/weapon involved.

e. Range Control will notify the Oklahoma Army National Guard Safety Office of all malfunctions and misfires.

2-14. Unexploded Ordnance (UXO)

a. UXO is any explosive munition such as a projectile, grenade or bomb that has either been fired from a gun, propelled by a rocket or otherwise met the requirements for arming, but has failed to detonate. Any object that appears to be a UXO will be presumed as such.

b. UXO will not be disturbed under any circumstances. UXO will be clearly marked, no closer than ten (10) feet, and a guard will be posted until relieved by Range Control/EOD personnel. When personnel locate UXO the Range OIC must submit the following information to Range Control:

- (1) Coordinates of UXO.
- (2) Number of items (rounds).
- (3) Type of UXO (if known - artillery shell, grenade) and a description.
- (4) How marked (by the unit/personnel discovering the item).
- (5) Name/rank/unit of individual reporting the UXO.

c. In the case of grenades or other munitions that may be immediately hazardous to personnel, firing/training will be halted until qualified EOD personnel clear the dud.

d. Commanders and Range OICs must brief their personnel of the danger that UXO presents, the requirement to mark the location of UXO, and to report the marked location to the commander or OIC as soon as possible.

2-15. Clearing of weapons

a. Upon completion of firing or when changing firing orders/crews and prior to any weapons leaving the range, the OIC or safety officer will ensure that each weapon is cleared of all live ammunition and/or expended ammunition.

b. Each weapon that is cleared will have the bolt or breech locked in the open position.

2-16. Erratic firing

- a. Any projectile that impacts outside of safety limits as prescribed by this regulation or as depicted on the Camp Gruber Surface Danger Zone (SDZ) map will require immediate investigation and corrective action.
- b. Any individual detecting rounds landing outside of their authorized limits or the established impact area will immediately initiate a "CEASE-FIRE-FREEZE" and contact Range Control and report the following:
 - (1) Individual identification.
 - (2) Date and time round observed.
 - (3) Location of observed round.
- c. Range Control will notify the Oklahoma Army National Guard Safety Office.

2-17. Cease-fire procedures

- a. Any individual, military or civilian, who observes an unsafe act or condition, may stop firing by commanding a "CEASE-FIRE".
- b. All personnel must remain alert and watchful for unauthorized personnel, vehicles or aircraft that might inadvertently wander into danger areas. IF this occurs, cease firing and notify Range Control immediately.
- c. A "CEASE-FIRE" command applies to all units regardless of the individual initiating the cease-fire.
- d. The initiating individual will report to Range Control immediately the reason for cease-fire over the quickest means possible.

2-18. Maneuver Area Training

- a. The Camp Gruber Special map (1:50,000) depicts the Training Areas available for use by units. All areas (less TA200) are open for maneuver training. Several training facilities are located within TA200, and must be requested specifically. The 500 series Training Areas are under the control of the Oklahoma Department of Wildlife and Conservation, and require written coordination prior to use.
- b. OIC/SO responsibility. All brigade, battalion and separate companies will contact Range Control prior to occupying a Training Area and provide Range Control with the OIC (SSG or above). The OIC/SO will be identified on a certification memorandum (ref. paragraph 2-3). The OIC will report to Range Control for the following actions:
 - (1) Receive range (training area) safety brief.
 - (2) Complete the opening form for the affected Training Areas (note: unlike the Range opening/closing procedure sheet, only 1 form is required for training areas regardless of the number of days spent in the TAs).
 - (3) Provide initial six digit coordinates or physical location of the headquarters where the OIC can be contacted.
 - (4) Headquarters elements may assume these OIC requirements for subordinate units.
 - (5) Turn in a certification memorandum identifying the OIC/SO for the unit.
- c. Communication.
 - (1) All units occupying the Training Areas are required to initiate and maintain communications with Range Control (FM). Communications checks are required upon occupation, clearing, and every four hours when operating in the training area. Headquarters elements may assume these communications requirements for subordinate units providing they have communication with them.
 - (2) All units occupying training areas will continuously monitor FM freq. 40.80 (range control) and make required communications checks every 4 hours at: 0400, 0800, 1200, 1600, 2000, 2400 hours.

2-19. Restricted and Off -limits areas

- a. DO NOT enter onto ranges and other training areas unless approved by Range Control.
- b. DO NOT use firing ranges for tactical training or non-firing exercises without written approval from Range Control.
- c. DO NOT circumvent road guards or road barriers unless approved by Range Control.
- d. DO NOT conduct tactical training or fire any ammunition or pyrotechnics in the cantonment area (area located between 3rd street east to 18th street, and Sicily road south to Central Europe road) without written approval from Range Control.
- e. DO NOT enter or dismantle manmade objects/temporary barriers, fenced areas unless approved by Range Control.

2-20. Wildlife Management

a. By agreement with the Oklahoma Department of Wildlife and Conservation, portions of Camp Gruber have been designated for public wildlife activities during specific time periods and when not utilized for military operations. Training Areas available for military operations are reduced during the following specific dates:

- (1) The nine-day primitive deer gun season, beginning in October.
- (2) The nine-day deer gun season, beginning in November.
- (3) The last twenty-one days of December (11-31 Dec) for all wildlife activities.
- (4) The nine-day spring turkey hunt beginning the second Saturday of April.

b. Military operations are not allowed in Training Areas that are open for wildlife activities.

c. All other wildlife activities throughout the year will be based on area availability.

d. Specific requirements, to include access and area locations are listed in CG Regulation 200-3, Wildlife Management.

2-21. Vehicle operations and movement

a. The speed limits posted in this regulation apply to all personnel (military and civilian) operating on Camp Gruber. Utilize safe driving practices at all times.

b. DO NOT operate POVs beyond the cantonment area (area located between 3rd street east to 18th street, and Sicily road south to Central Europe road) without a Range Control vehicle pass.

c. DO NOT exceed posted speed limits (cantonment area, north/south and hilltop roads). All other maximum speed limits are listed in the below table:

Table 2-1 Vehicle Speed Limits*

<u>Wheeled Vehicles</u>	<u>Maximum Speed</u>	<u>Tracked Vehicles</u>	<u>Maximum Speed</u>
<u>Normal Conditions</u>		<u>Normal Conditions</u>	
Established Roads (paved/non-paved, not posted)	35 MPH	Established Trails (non-paved)	25 MPH
Cross Country/Off Road	25 MPH	Cross Country/Off Road	20 MPH
<u>Limited Visibility (Night Vision Goggles - NVGs)</u>		<u>Limited Visibility (Night Vision Goggles - NVGs)</u>	
With NVGs - Established Roads/Trails	25 MPH	With NVGs - Established Trails	15 MPH
With NVGs - Cross Country/Off Road	20 MPH	With NVGs - Cross Country/Off Road	10 MPH
Without NVGs - Established Roads/Trails	20 MPH	Without NVGs - Established Trails	10 MPH
Without NVGs - Cross Country/Off Road	15 MPH	Without NVGs - Cross Country/Off Road	5 MPH
<u>Convoy Operations (More than 5 Vehicles)</u>		<u>Maximum Speed</u>	
<u>Normal Conditions</u>			
Established Roads (paved/non-paved, not posted)	20 MPH		
Cross Country/Off Road	15 MPH		
<u>Limited Visibility (Night Vision Goggles - NVGs)</u>			
With NVGs - Established Roads/Trails	15 MPH		
With NVGs - Cross Country/Off Road	10 MPH		
Without NVGs - Established Roads/Trails	10 MPH		
Without NVGs - Cross Country/Off Road	5 MPH		

* Commander, Camp Gruber Training Center, may change existing speed limits due to weather conditions. Changes will be coordinated with using units by Range Control.

d. Tie down antennas when moving within the cantonment area. Cover antenna tips with a protective ball to prevent injury to personnel.

e. Utilize seat belts and safety restraints for both civilian and military vehicles.

f. Utilize protective headgear for both civilian and military motorcycles and all-terrain vehicles.

g. Highway warning devices will be used when vehicles are stopped or disabled on public highways/roads surrounding Camp Gruber, cantonment roads and range roads. In no instance will personnel attempt to repair a downed vehicle (located in a road/trail) without a marking device to warn oncoming vehicles (i.e. soldier w/flashlight or signaling device).

h. Vehicle movement at bivouac sites. Units must apply risk management procedures to control vehicular movement within their field sites. Control measures will be established based on the tactical mission requirements and the unit commander's risk assessment.

i. Motor marches (convoys) will be coordinated with Range Control NLT 24 hours in advance. Units are responsible to turn in a strip map (convoy route) and timeline for motor movement. Additional risk assessments may be required (as determined by the Range Control NCOIC) prior to conducting the motor movement.

(1) Vehicles involved in a motor march must maintain a minimum safe distances.

(2) The front and rear vehicles of a motor march should have communications capability with each other.

j. Limited visibility (blackout) marches.

(1) Units are required to coordinate night convoys with Range Control 24 hours in advance. Units must turn in a route map and completed risk assessment prior to executing any night (blackout/NVG) marches.

(2) Unit Commanders must ensure that appropriate intersections are manned by road guards equipped with flashlight or recognition devices enabling them to halt and warn other vehicles approaching the line of march.

(3) Travel on or across hard surface roads (cantonment area or public highways) will be with service drive only.

(4) The Cantonment area is NOT an authorized 'blackout drive' area. Vehicles will use service drive within this area.

(5) Only command-certified personnel will operate vehicles with night vision goggles/devices.

(6) Vehicles will not travel under blackout conditions until passing the established light lines. Posted Light Line Markers: Youth Camp Road (UK04234928), Urban Assault Course (UK04344950), Sicily Road (UK04885085), and 24th Street/Pistol Loop Road (UK04275098).

k. Sleeping on, in, or under any vehicle is prohibited.

(1) Tracked vehicles.

(a) All armored/fighting tracked vehicles must travel with a minimum of two personnel, i.e. driver and vehicle commander. Personnel are required to have communications between driver and track commander. Radio is required between the lead and trail vehicles of each movement element.

(b) Dismount guides must be employed when moving in close quarters, crossing hard surfaced roads and in bivouac areas at all times.

L. Units that wish to move vehicles that are uploaded with ammunition (to and from ranges) must inspect the weapon system (main gun, coaxial machine gun, and small arms) to ensure all live ammunition has been removed and is safe for transport.

m. Convoy Movements. Refer to OMD Pam 55-1.

(1) All convoy movements will be coordinated with Range Control NLT 24 hours prior to move.

(2) Units will submit a convoy movement table and map overlay for approval by Range Control for any convoy movement within the training center boundaries.

2-22. Ranges available at Camp Gruber

- a. Combat Pistol Qualification Course.
- b. Basic 25-Meter Ranges (Zero) - 3 range facilities.
- c. Modified Record Fire (MRF) Ranges - 2 range facilities.
- d. Machine Gun Transition and 10-Meter Range.
- e. Grenade Launcher Range (Practice Round).
- f. Light Anti-Armor (AT4) Range (sub caliber).
- g. Hand Grenade Familiarization Range.
- h. Hand Grenade Qualification Course.
- i. MK 19 (40mm) Machine Gun Range (practice round only).
- j. TOW Anti-Tank Missile Gunnery Range (MILES).
- k. TOW Live Fire Range.
- l. Anti-Armor Tracking and Live Fire Range (practice round only).
- m. Mortar Sub caliber Range and Mortar FRTR Range.
- n. Sniper Field Fire Range.
- o. Demolition Ranges – 2 facilities.
- p. Fire and Maneuver Range. (Buddy Team)
- q. Infantry Squad Battle Courses – 5 facilities. (2 different Convoy scenarios, 3 different Dismounted scenarios)
- r. Shotgun qualification range

2-23. Range safety requirements

- a. Officer in Charge (OIC) and Safety Officer (SO) requirements are listed in Appendix G.
- b. Communication requirements. When firing, units must maintain two means of communication with Range Control. The primary means of communication is by FM radio. Telephone may be the secondary means of communication.

2-24. Range operations

- a. Each range must have a qualified aid man (or combat lifesaver) with aid bag, litter, litter-bearing vehicle, and driver (other than aid man).
- b. A red range flag must be flown (from the range location and the flagpole located on Range Loop Road) while the range is occupied. During periods of limited visibility, beacon lights will be displayed from the specific range and the flagpole on Range Loop Road. Additional range-specific guidance is also provided in Appendix A and the specific Range Packet.
- c. Hearing protection must be worn at all times by personnel on the Range.
- d. Only authorized firing points will be used for live firing.

2-25. Ammunition and pyrotechnics

- a. Ammunition will be stored on the range IAW AR 385-63, DA Pam 385-63, DA Pam 385-64, and TM 9-1300-206.
- b. Vehicle storage will be IAW published FM, TM, and DA Safety Message guidance.
- c. A DA Form 2203R must accompany all DA Form 581s that include explosives/demolitions. No units will be authorized to fire demolitions unless a completed copy of the DA 581 'issue' and DA 2203-R are on file at the Range Control.
- d. Pyrotechnics will be used for their original intended purpose (effect) and will not be modified.

2-26. Explosive/Blasting operations

- a. Each commander will comply with all applicable Department of Defense (DOD), Federal, and State regulations concerning the use of explosives. All blasting operations on Camp Gruber will be conducted under the direction of a qualified OIC and Safety Officer.
- b. The OIC and Safety Officer will be present on the range for each blast.
- c. *Anticipated blasts schedule (target folder) and risk management worksheet (IAW FM 100-14) will be submitted to Range Control for approval. This schedule must be submitted prior to issuance of the range (refer to FM 5-250). Range Control may limit the area covered, timing, and sequence of blasting as listed in the blasting schedule.*
- d. All blasting will be conducted between sunrise and sunset, unless approved by Range Control.
- e. *Blasting/Demolitions will not be conducted on Camp Gruber when the estimated cloud cover is greater the 80 percent and the cloud ceiling is estimated at less then 2000 feet.*
- f. OIC/SO requirement - Appendix G.
- g. Communication requirements. When firing, units must maintain two means of communication with Range Control. Units must maintain two means of communication with Range Control. When the range is occupied, only FM communication is required.
- h. Range operations:
 - (1) The Heavy Demolition Range is restricted to non-fragment producing explosives.
 - (2) The Breaching Range and Heavy Demolition Range cannot be operated simultaneously.
- i. Detailed demolition/explosive limits/restrictions are listed in Appendix A.
- j. Units must request approval from Range Control to employ field expedient procedures or explosives.

2-27. Collective Live Fire Ranges

- a. The following ranges are used to support collective live-fire requirements:
 - (1) Fire and Maneuver Range (Buddy-Team).
 - (2) Three Infantry Squad Battle Course Scenarios (ISBC):
 - (a) Squad Assault (Knock out Bunker).
 - (b) Ambush Range (Ambush moving vehicle convoy).
 - (c) Deliberate Attack on Fortified Position. (Trenchline)
 - (3) React to Convoy Ambush.
- b. The using unit's chain of command retains responsibility for safety on the ranges. Unit observer controllers/cadre must emphasize safety during the conduct of these ranges. Leaders enforce safety throughout the execution of the live fire event. The goal is a safe/realistic execution of the event.
- c. Using units will provide detailed risk assessments (IAW FM 100-14) to Range Control prior to the collective live fire event. Additional instructions on specific risk assessments are contained in TC 7-9 (Infantry Live Fire Training) and the specific Range Packet. **The Range OIC will complete and turn in to Range Control a Collective Live Fire Checklist with all supporting documentation prior to the range being issued.** (Appendix I in this publication)
- d. OIC/SO requirements - Appendix G.
- e. Communications requirements. When firing, units must maintain 2 means of communication with Range Control. There are no telephones located on any of the collective range facilities.
- f. Range operations
 - (1) An approved risk assessment worksheet must be on file at Range Control prior to the collective live fire range going 'hot'.
 - (2) Each range must have a qualified aid man with aid bag, litter, and litter bearing vehicle with driver.
 - (3) Red range flags must be flown (from the range and from Range Loop Road) while the range is occupied. Additional requirements are listed in the specific range packets.
 - (4) Helmets and hearing protection must be worn at all times by personnel on the range. Additional protective equipment (based on weapons/ammunition employed) may be required. Range Control will notify using units of additional requirements prior to issuance of the range.
 - (5) Barriers and road guards will be emplaced IAW Appendix A.

2-28. Aviation/Airborne operations

- a. There are several Drop Zones (DZs), listed in the Assault Zone Availability Report (AZAR) – Headquarters - Air Mobility Command, that are approved for various airborne operations. Using units will check with Range Control to determine availability and restrictions.
- b. All users will comply with the restrictions and instructions contained in the NOTAM or Drop Zone Survey.

2-29. Smoke operations

- a. Units desiring to conduct smoke operations must provide an overlay to Range Control showing the area that will be affected. The unit will cease operations if climatic conditions result in smoke spreading beyond the overlay limits.
- b. Smoke operations are prohibited in the cantonment area, enclosed spaces (i.e. tunnels/basements), and surrounding civilian highways/roads.
- c. Units will contact Range Control when smoke operations begin and cease.
- d. Units will wear protective masks when using HC smoke.
- e. HC smoke is prohibited from use in confined areas.

2-30. Urban Operation (UO) facilities

- a. The Urban Assault Course (MAC) and the Collective Training Facility require additional safety requirements that are included in the range packets.
- b. A separate safety briefing is required prior to issue of these facilities.
- c. Range OIC, Safety Officer, communications, and medical support requirements are listed in Appendix A and the specific Range Packets.
- d. Since both facilities require intensive clearing procedures, using units are advised to coordinate turn in requirements with Range Control when they are issued the facilities.

2-31. Air Assault Obstacle Course

- a. This facility consists of nine obstacles: tough one, confidence climb, six vaults, high step over, low belly over, low wire, stop swing jump, incline wall, and the weaver.
- b. Obstacles are arrayed along the east side of the Air Assault course.
- c. Specific safety precautions are published in the Range Packet.
- d. A safety briefing is required prior to issue of this facility.
- e. FM communication and a medic with litter bearing vehicle are required for use of this facility (see Appendix A).

2-32. NBC Chamber

- a. This facility consists of a building utilized for individual exposure to chemical agents (confidence chamber).
- b. Specific safety precautions are published in the Range Packet.
- c. A safety briefing is required prior to issue of this facility.
- d. FM communication and a medic with letter bearing vehicle are required for use of this facility (see Appendix A).

2-33. Use of CS and riot control agents (RCAs)

- a. CS/RCAs are only authorized for use in the NBC chamber and the Training Areas.
- b. *CS/RCAs are prohibited from use within 200 meters of the cantonment area and the installation boundaries, on any firing point, and any firing range.*
- c. Units desiring to use CS/RCAs will coordinate with Range Control. If these agents are being used in conjunction with maneuver training, the unit will also provide an overlay detailing the scheme of maneuver and intent of CS/RCA employment.

2-34. Engineer rock crusher-screening plant site

- a. Requests for use of this equipment must be forwarded to Operations and Training Division.
- b. FM communications and a medic with litter bearing vehicle is required for use of this facility.

2-35. Land navigation courses (TA 200 and EIB)

- a. TA200 land navigation course is located within the cantonment area. EIB land navigation course is located with Training Areas 103 and 104.
- b. Specific safety precautions are published in the Range Packet.
- c. A safety briefing is required prior to issuance of this facility.
- d. FM communication and a medic with letter bearing vehicle are required for use of this facility (see Appendix A).

2-36. Formations and Roadway Movements

- a. Formations and roadway movements within requested training areas do not require any additional coordination.
- b. Formations and roadway movements within the cantonment area (TA200) require prior coordination with Range Control 24 hours prior to the event. Units will also follow requirements listed in Chapter 9-Troops on Roadways; Camp Gruber Regulation 385-10 dated 1 March 2005.

2-37. Risk Assessment

- a. Nonstandard range and training activities with high or extremely high residual risk must Be evaluated as outlined in FM 5-19 and a DA Form 7566, Composite Risk Management Worksheet must be approved by the Range Control OIC.

Chapter 3

TADSS

3-1. General

Camp Gruber has a variety of training aids, devices, simulators, simulations (TADSS) items and other training equipment available for loan or use on site. Other TADSS as needed and not currently in Camp Gruber inventory may be acquired locally, through a Training Support Centers (TSC), or possibly developed with Camp Gruber assistance. For a more detailed description of the items listed below, including quantities, see Appendix I.

3-2. TADSS Items Available

- a. Training Aids
 - (1) Grenade identification kit.
 - (2) Mock IEDs.
- b. Training Devices
 - (1) IED, booby trap, and anti-personnel mine simulators which generate an audible and visual effect.
 - (2) Glock 9mm simunitions pistols.
 - (3) Smoke generators.
 - (4) Practice mines.
 - (5) Dummy grenade bodies (M67 frag).
- c. Simulators
 - (1) Call For Fire Trainer (CFFT)
 - (2) HMMWV Egress Assistance Trainer (HEAT).
 - (3) Laser Convoy Counter Ambush Training System (LCCATS).
 - (4) Laser Marksmanship Training System (LMTS).
 - (5) Sniper Training System (STS).
- d. Simulations
 - (1) Engagement Skills Trainer (EST).
 - (2) Virtual Convoy Operations Trainer (VCOT).
 - (3) Mobile Virtual Training Capability (MVTC).

3-3. Other Training Equipment

For our purposes, TADSS also includes such training equipment as pry axes and other breaching devices, portable ladders, body armor, fragmentation vests, safety equipment associated with paint ball use, and other miscellaneous items. For a more complete and current listing check with the Camp Gruber O&T Branch.

3-4. Requesting Use of TADSS

- a. Portable Items

All items listed in 3-2, with the exception of EST, HEAT, and VCOT may be checked out as available using DA Form 2062 (Hand Receipt) on a first come, first served basis.
- b. Facilities

EST, HEAT, and VCOT are considered facilities subject to request by use of the Range Facility Management Support System (RFMSS). Contact Camp Gruber O&T Branch, Scheduling for guidance on use of RFMSS. For these items, time of operation and number of personnel trained is required to be reported to Range Control on a daily basis.

c. Items Requiring Trained Operators

All simulators (3-2.c), simulations (3-2.d) and most devices (3-2.b.1 thru 3-2.b.3) listed above will require a qualified operator. If requesting unit does not have a qualified operator, Camp Gruber may (1) arrange for operator training of requesting unit personnel to occur prior to use of the equipment, or (2) provide an operator for the equipment if requested at a minimum of 10 days in advance.

APPENDIX A

TABLE OF CONTENTS

<u>LIVE FIRE RANGES</u>	page
R0100 MG RANGE	A - 2
R0400 SNIPER RANGE	A - 6
R0600 ZERO EAST RANGE	A - 9
R0900 PISTOL RANGE	A - 11
R1100 ZERO WEST RANGE	A - 13
R1300 MRF1 RANGE	A - 15
R1500 AT - 4 RANGE	A - 17
R1501 25M SHOTGUN QUAL	A - 19
R1600 M203 RANGE	A - 21
R2100 MORTAR SRTR RANGE	A - 23
R2100 MORTAR FRTR RANGE	A - 25
R2200 HAND GRENADE LF	A - 28
R2300 MRF2 RANGE	A - 31
R2600 ZERO 2 RANGE	A - 33
R2900 BREACH RANGE	A - 35
R3000 HEAVY DEMO RANGE	A - 38
R3100 TOW LF (TP)	A - 41
R3200 MK - 19 RANGE	A - 44
R3300 CONVOY AMBUSH	A - 46
R3400 REACT TO CONVOY AMBUSH	A - 49
R3400 TRENCH LINE LF	A - 52
R3500 SQUAD ASSAULT	A - 55
R3600 BUDDY TEAM LF	A - 58
R4300 UAC GRENADIER WALL	A - 61
 <u>NON- LIVE FIRE RANGES</u>	
R1800 HAND GRENADE QUAL	A - 64
R2000 NBC CHAMBER	A - 66
R3800 RAPPEL TOWERS	A - 68
R3900 OBSTACLE COURSE	A - 69
R4100 TA 200 LAND NAV	A - 71
R4200 MOUT CTF	A - 73
R4300 MOUT MAC (UAC)	A - 76
R4500 EIB LAND NAV	A - 79
RTOWR TOW MILES	A - 81
 <u>TADSS</u>	 A - 84

LIVE FIRE RANGES

R0100. Safety precautions

Multi-purpose Machine Gun Range (1LT Jack Montgomery Medal of Honor MG Range)

a. References:

- (1) FM 3-22.68.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0147253591.

c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to zero M249 SAW, M60 MG, M240 MG and the M2 MG weapon system; detect; identify; engage and defeat stationary infantry targets in a tactical array. Range consists of 8 firing points. M2 MG firing is restricted to lanes (2-5). The 10 meter zero firing line is located directly in front of the firing berm and consists of 8 firing points. The transition range consists of eight firing points and automated targetry located at distances of 100, 200, 300, 400, 500, 600, 700 and 800 meters for 5.56mm and 7.62mm weapons. Additional targets at 1100m and 1500m for .50 Cal Weapons on lanes 2-5. Additional targets at 900m and 1000m on lanes 6-7 for sniper fire. Ammunition authorized for use on this range are M249/5.56mm, M60 and M240/7.62mm and M2/. 50 caliber.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
- (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Machine Gun Range flagpole and the main Range Loop Road flagpole.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions

- (1) Units will not utilize the transition range with the M2 or M60/M240 machine guns without first conducting a zero exercise (refer to the specific weapon system FM).
- (2) Night Firing: Prior to any night firing on the MG range, units will set in weapons before dark with a range card for each weapon to ensure firers do not fire across adjacent lanes.
- (3) Each firing point utilized on the firing line will have a dedicated Assistant Range Safety Officer to ensure the weapon is operational; to assist the gunner in the application of remedial action when immediate action has failed to reduce a malfunction or stoppage; to observe for any unsafe condition during firing; to ensure the gunner fires only in his/her assigned lane; and to prevent injury to personnel.
- (4) M2/50 caliber machine gun firing will be restricted to lanes 2 through 5 only.
- (5) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.

g. Road Guard Requirements: None.

h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing:

- (1) M249/M60/M240; None
- (2) M2; Squad Assault Range, Fire and Movement Range.

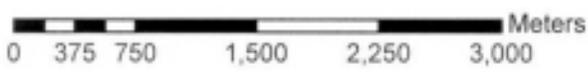
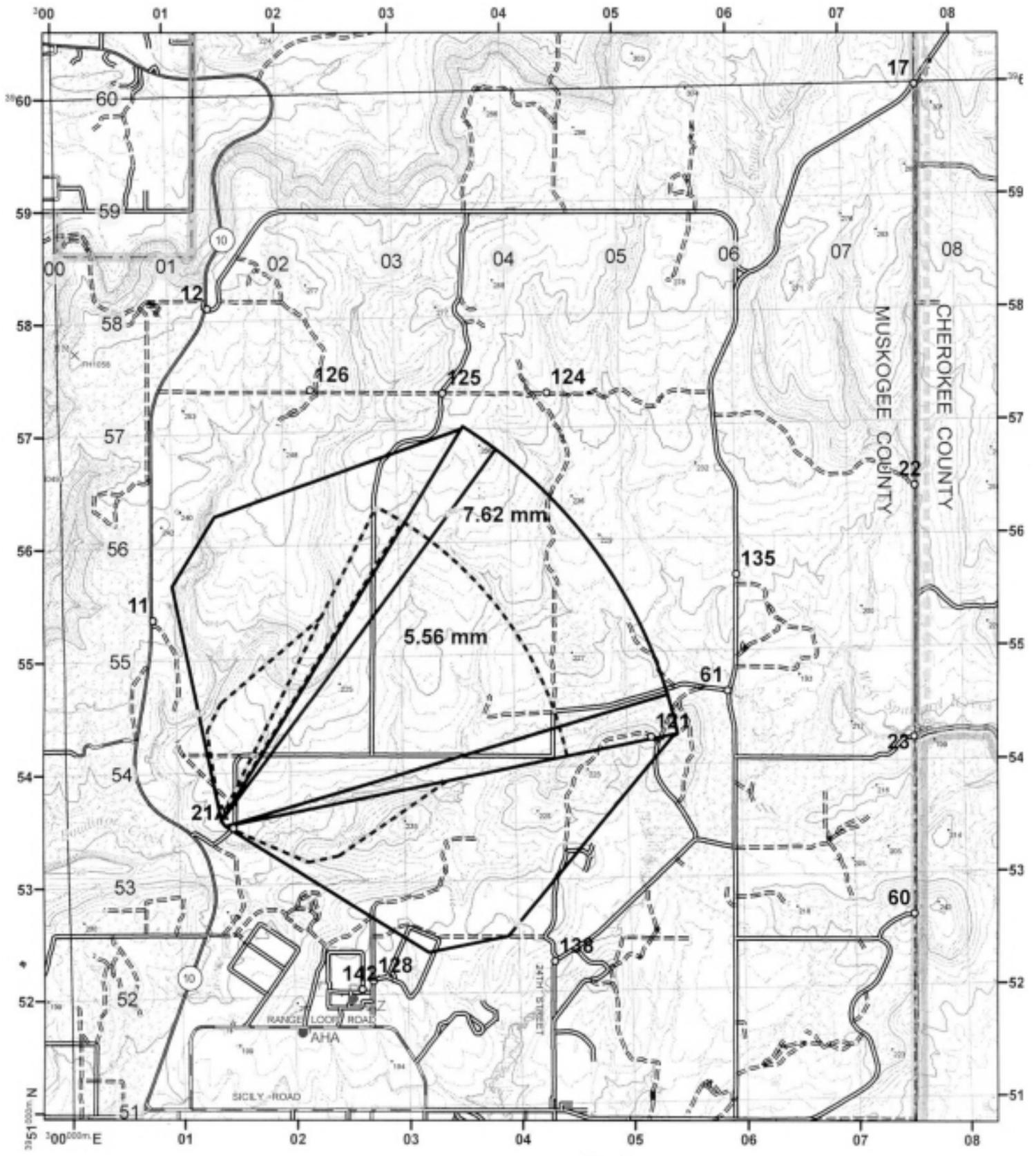
j. Barriers:

- (1) M249/M60/M240B:
 - (a) Gates; 11, 12, 17, 21A, 22, 23, 60, 61.

- (b) Cable Gates; 121,124,125,126,128,135,136,138, and 142.
- (2) M2:
 - (a) Gates; 11, 12, 17, 21A, 22, 23, 24, 60, 61, 64, 67.
 - (b) Cable Gates; 118, 122, 128, 138, 139 and 144.

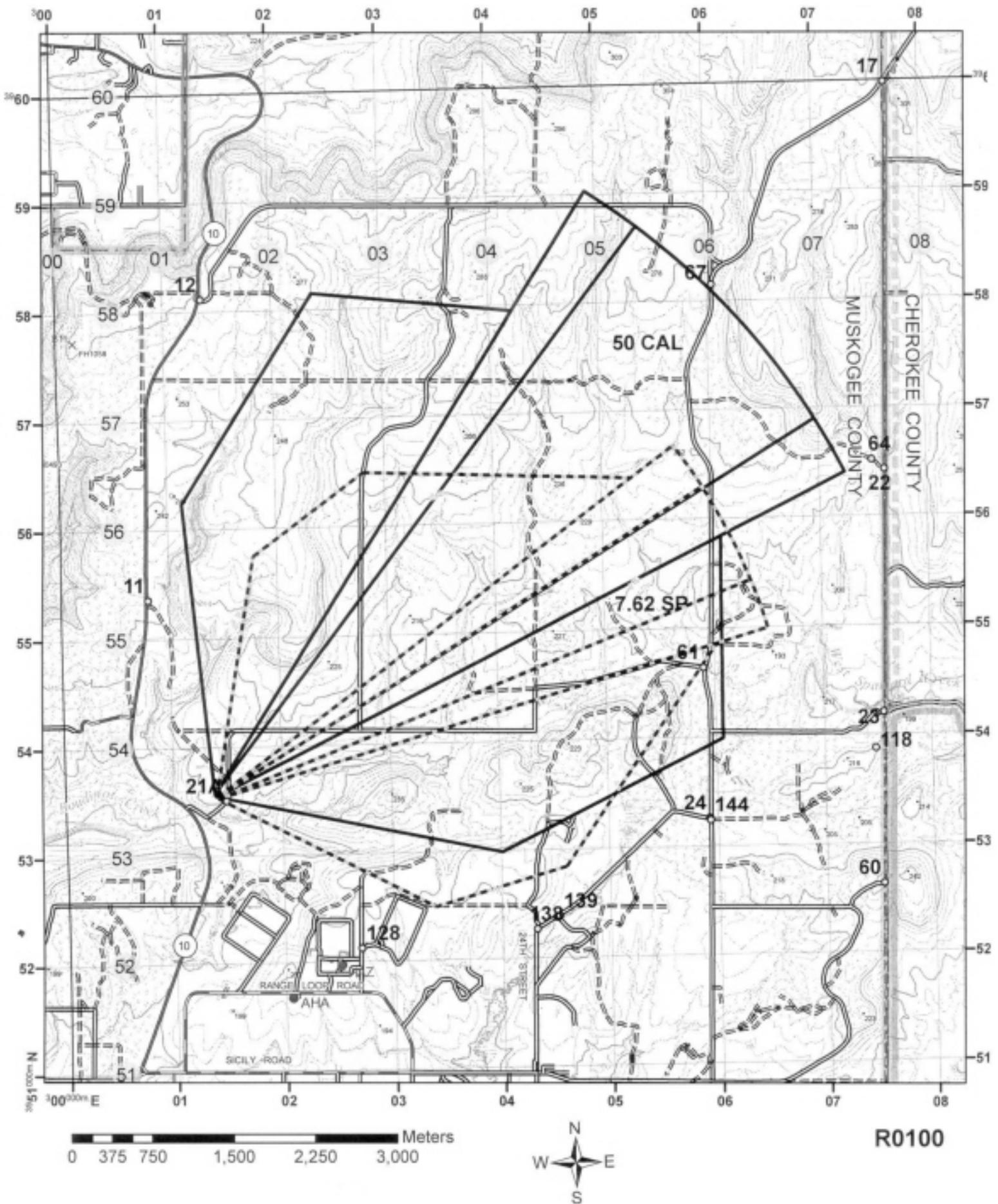
k. For transportation of ammunition from the AHA to the MPMG, units must provide a gate guard at gate 21 and emplace barriers at Grid: 301573.3952474 and Grid: 301758.3952017

MPMG RANGE 5.56 & 7.62 mm SDZ



R0100

MPMG RANGE 50 Cal & 7.62 SP SDZ



R0100

R0400. Safety precautions
Sniper Field Fire Range (Sniper Range)

a. References:

- (1) FM 3-22.10.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0659053464.

c. Description and Capacity: A live-fire range used to train and test soldiers on the skills necessary to detect, identify, engage and defeat stationary and moving infantry targets in a tactical array. Weapons/ammunition authorized for use –M24/7.62mm and M85/. 50cal. Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from the range and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry or support equipment.

(4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

(1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.

(2) M85/. 50 cal firing will be restricted to lane 5 only.

(3) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.

(4) Units using this range to conduct tactical operations (not field fire) are responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issuance of the range.

(5) Units using this range to conduct tactical operations (not field fire) will develop a detailed, written training plan which will be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:

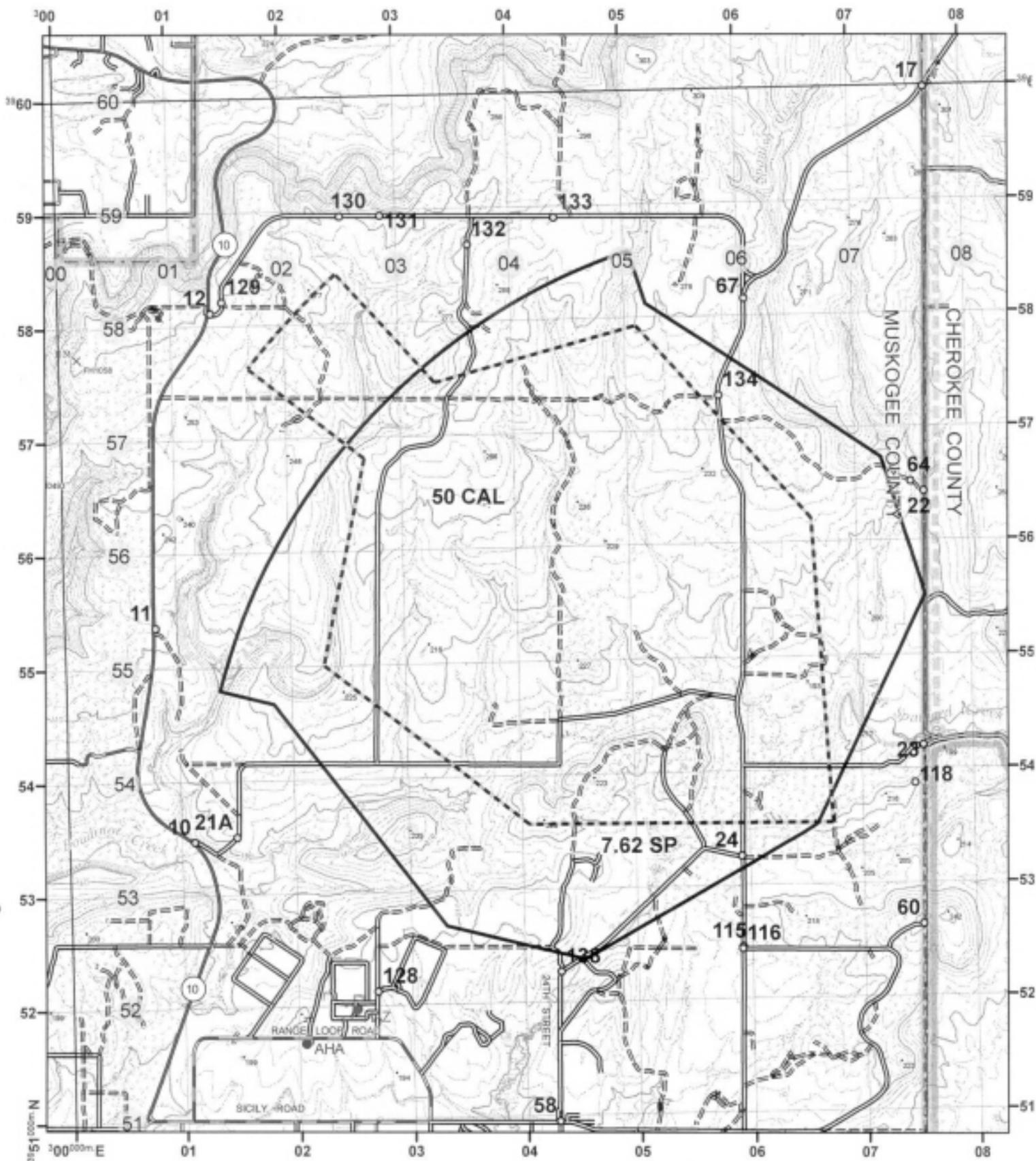
- (a) Maneuver and fire support plan.
- (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
- (c) Command, control, and communications plan.
- (d) Training areas/facilities required.
- (e) Targetry required.
- (f) Safety plan.
- (g) Observer/controller plan.

(6) Overhead firing techniques will not be conducted on this range.

g. Road Guard Requirements: One requirement at UV0602258227 (intersection of North-South and Wild horse Prairie road). Road guard is required to maintain FM communication with the Range OIC. Road guard is required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

- h. Impact Area closed during firing: See Range Surface Danger Zone.
- i. Range/s closed during firing: Heavy Demolition, TOW Live Fire, Breach Range, Fire and Maneuver (Buddy/Team), Ambush, React to Convoy Ambush, and Deliberate Attack.
- j. Barriers:
 - (1) Gates: 10, 11, 12, 17, 21A, 22, 23, 24, 58, 60, 64, and 67.
 - (2) Cable Gates: 115, 116, 118, 122, 128, 129, 130, 131, 132, 133, 134, and 138.
 - (3) Barricade: Using unit will place a road barricade at intersection of North-South and Hilltop road at grid vic. UV0604458167

SNIPER RANGE SDZ



0 375 750 1,500 2,250 3,000 Meters



R0400

R0600. Safety precautions

10/25-Meter Firing Range (Zero-East Range)

a. References:

- (1) FM 3-22.9.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0251352047.

c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifles as well as crew served machine guns. This range has 17 firing points (with foxholes). Targets are mounted on fixed frames. This range is used for rifle 25 meter and 7.62mm machine gun 10 meter zeroing range. Weapons/ammunition authorized for use on this range are M16 series and M4/5.56mm, M249/5.56mm and M60 and M240MG/7.62mm.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Target frame height will not exceed 48 inches from the ground for each firing point being utilized.
- (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero East Range flagpole and the main Range Loop Road flagpole.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

(1) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.

(2) The flaps on the range shelter to the rear of the range tower will be rolled up before Range Control personnel can clear the range.

g. Road Guard Requirements: None.

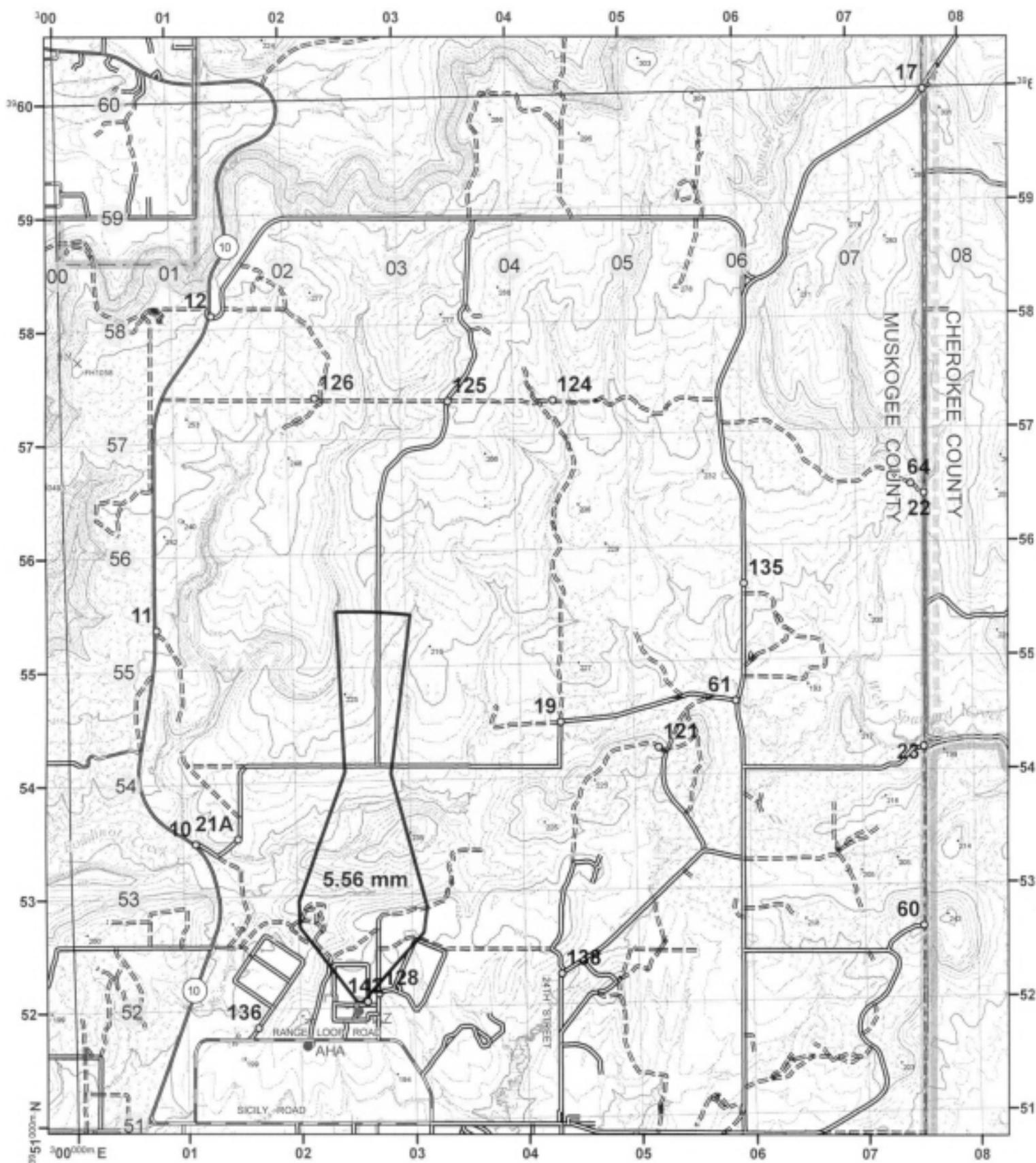
h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing: None.

j. Barriers:

- (1) Gates 10, 11, 12, 17, 19, 21A, 22, 23, 60, 61, and 64.
- (2) Cable Gates: 121, 124, 125, 126, 128, 135, 136, 138, and 142.

ZERO EAST RANGE SDZ



R0600

R0900. Safety precautions

Combat Pistol Qualification Range (Van T. Barfoot Medal of Honor Pistol Range)

a. References:

- (1) FM 3-22.35.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0238252065.

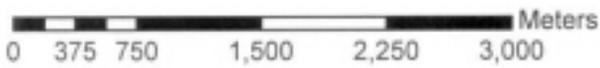
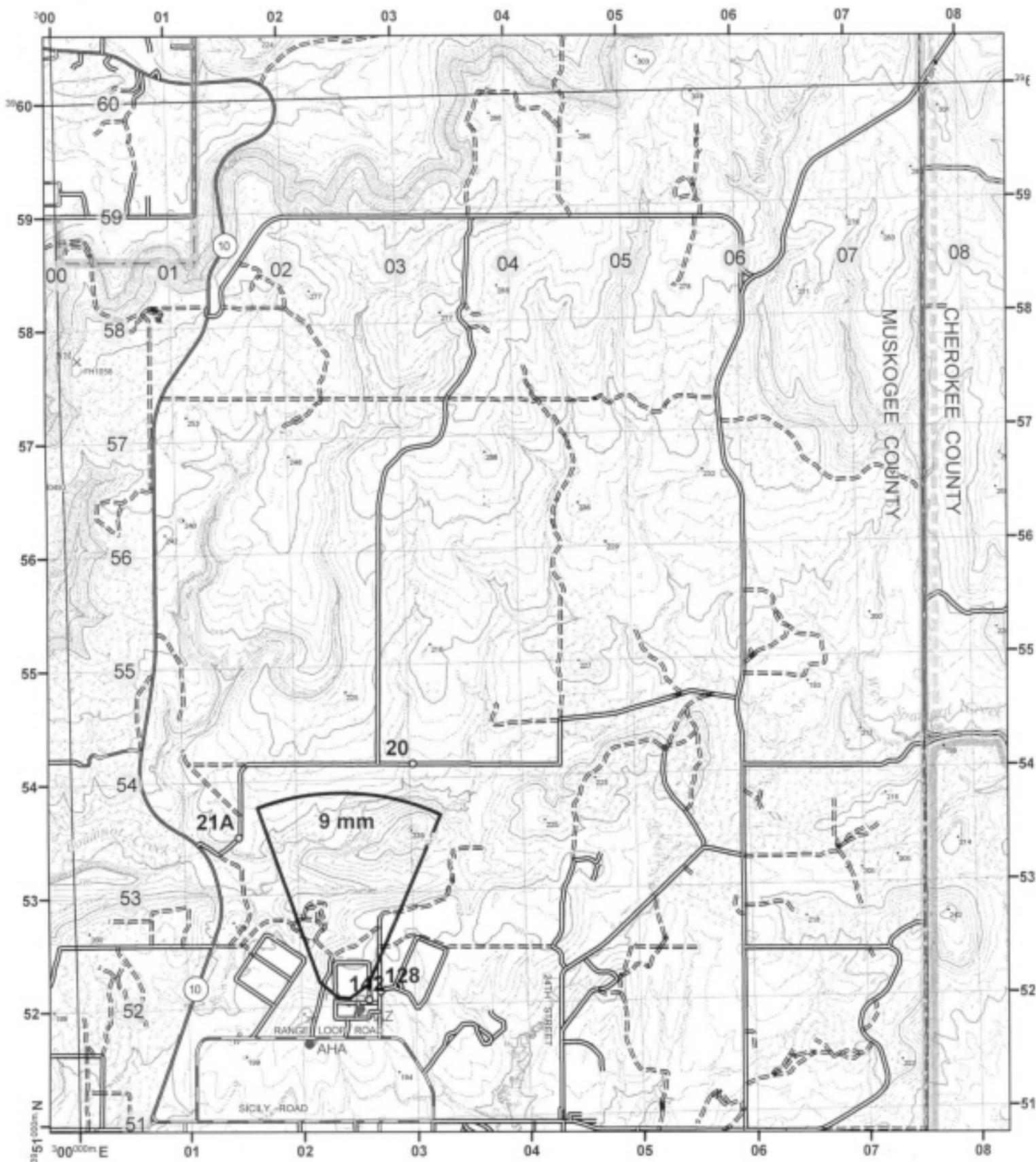
c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to detect, identify, engage and defeat stationary targets in a tactical array. The complex satisfies the training and qualification requirements of the 9mm, 38 caliber, and .45 caliber pistols. This range has 10 lanes with seven pop-up silhouette targets located at 10, 13, 16, 17, 23, 27 and 31 meters in each lane. Targets are electrically activated from the range control tower. Weapons/ammunition authorized for use on this range are pistol caliber 22, 9mm, 38, and 45.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range beyond the firing line during range operation. Range Control must approve any deviation of this policy.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Pistol Range flagpole and the main Range Loop Road flagpole.
 - (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (e) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.
- f. Special Instructions:
- (1) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.
 - (2) The flaps on the range shelter to the rear of the range tower will be rolled up before Range Control personnel can clear the range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone.
- i. Range/s closed during firing: None.
- j. Barriers:
- (1) Gate 20 and 21A.
 - (2) Cable gates 128 and 142.

PISTOL RANGE SDZ



R0900

R1100. Safety precautions

25-Meter Firing Range (Zero West Range)

a. References:

- (1) FM 3-22.9.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0225252083.

c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifles as well as light crew served machine guns (5.56mm only). This range has 17 firing points (with foxholes). Targets are mounted on fixed frames. This range is used for rifle 25 meter zero. Weapons/ammunition authorized for use on this range are M16 series and M4/5.56mm, and M249/5.56mm.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Target frame height will not exceed 48 inches from the ground for each firing point being utilized.
- (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero West Range flagpole and the main Range Loop Road flagpole.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

- (1) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.
- (2) The flaps on the range shelter to the rear of the range tower will be rolled up before Range Control personnel can clear the range.

g. Road Guard Requirements: None.

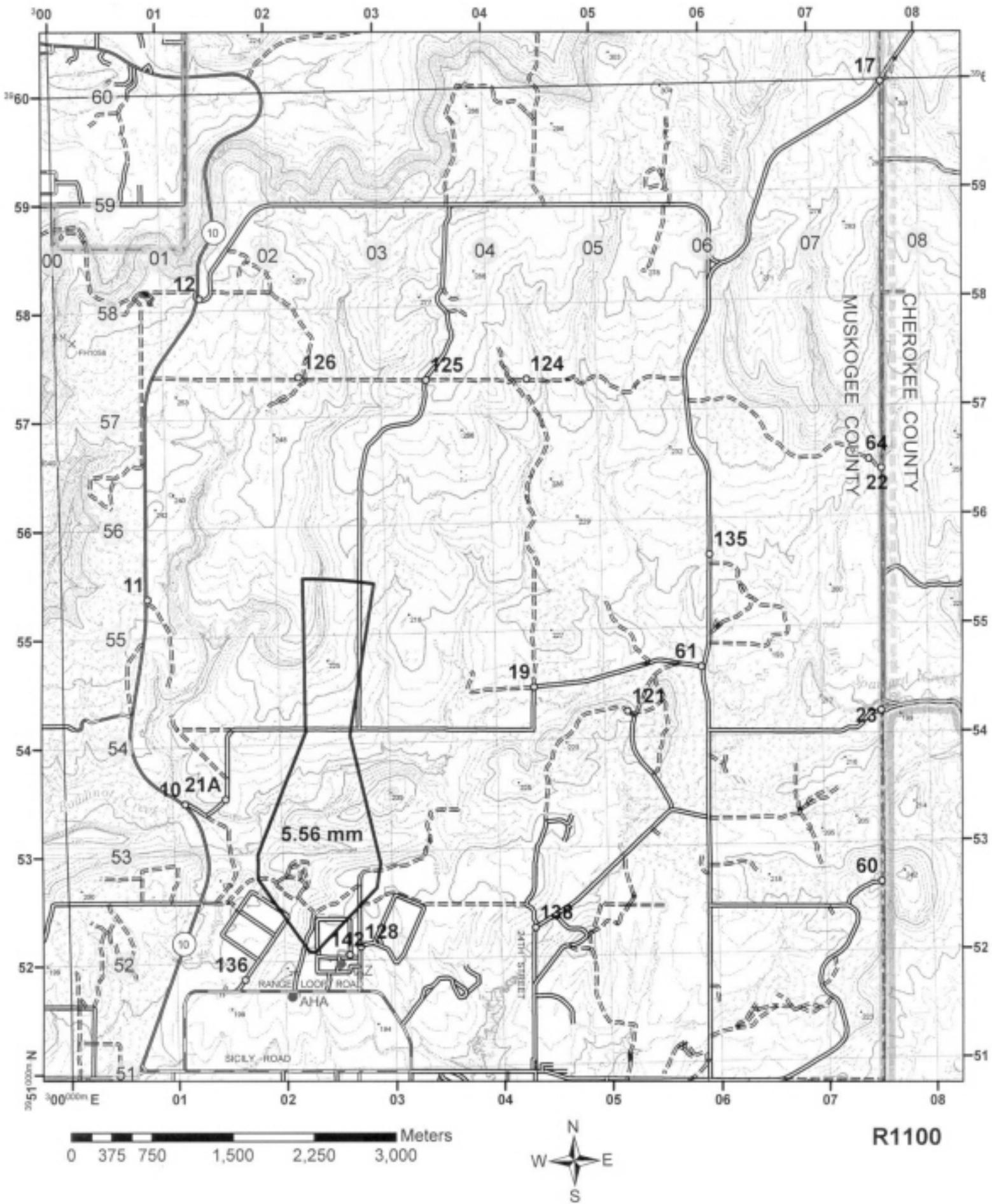
h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing: None.

j. Barriers:

- (1) Gates: 10, 11, 12, 17, 19, 21A, 22, 23, 60, 61, and 64.
- (2) Cable Gates: 121, 124, 125, 126, 128, 135, 136, 138, and 142.

ZERO WEST RANGE SDZ



R1300. Safety precautions

Modified Record Fire Range One (2LT Ernest Childers Medal of Honor MRF-1 Range)

a. References:

- (1) FM 3-22.9.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0290552202.

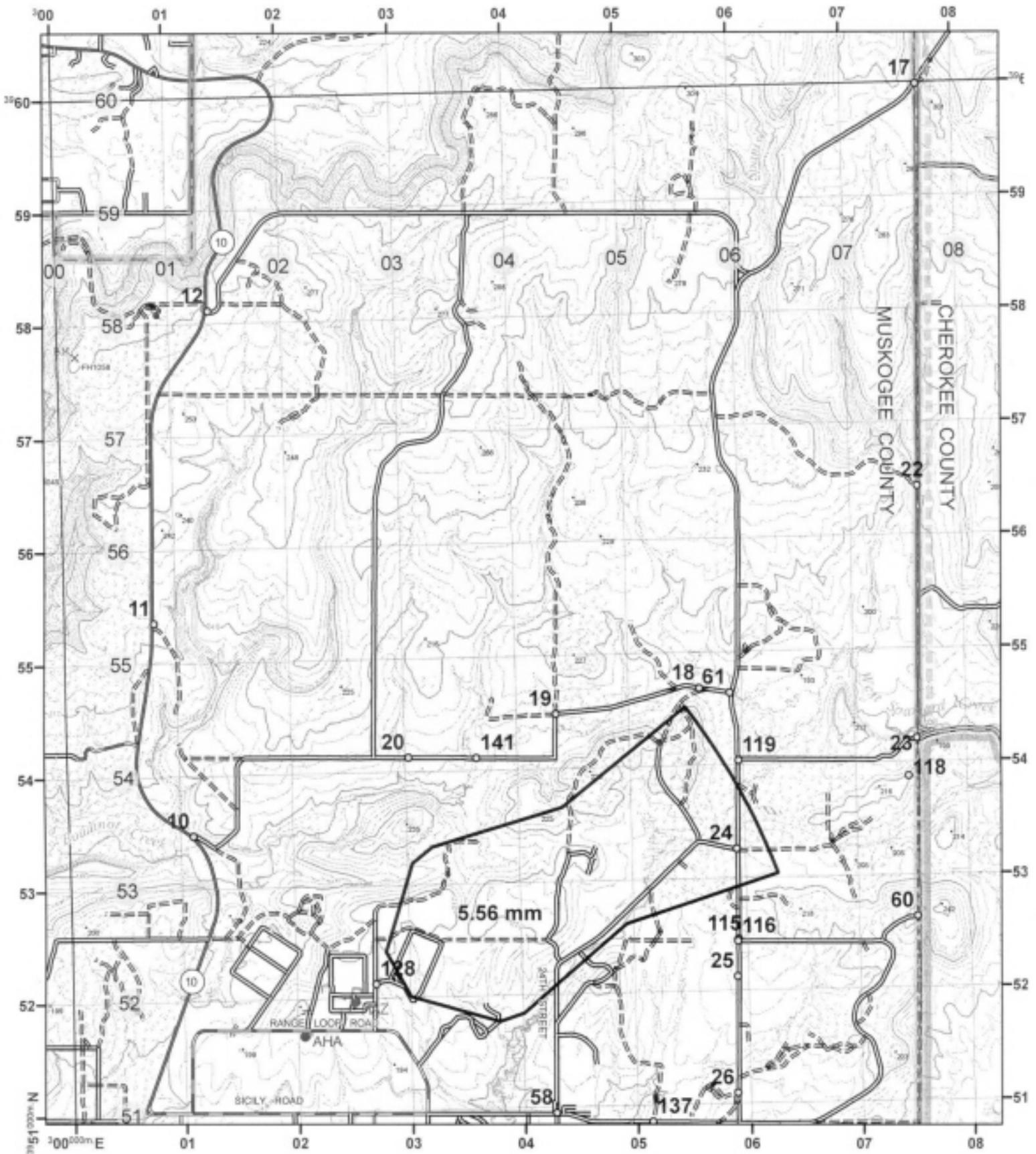
c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to identify, engage and defeat stationary infantry targets for day/night qualification requirements with the M16 and M4 rifles. This range has 16 firing points. Weapons/ammunition authorized for use on this range are M16 series, M4 and M249/5.56mm.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

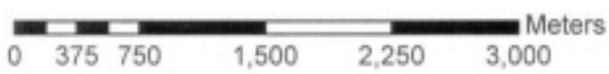
e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the MRF 1 Range flagpole and the main Range Loop Road flagpole.
 - (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.
- f. Special Instructions:
- (1) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.
 - (2) The flaps on the range shelter to the rear of the range tower will be rolled up before Range Control personnel can clear the range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone.
- i. Range/s closed during firing: React to Convoy Ambush Range.
- j. Barriers:
- (1) Gates: 10, 11, 12, 17, 18, 19, 20, 22, 23, 24, 25, 26, 58, 60, and 61.
 - (2) Cable Gates: 115,116, 118, 119, 128, 137, and 141.

MRF1 RANGE SDZ



MUSCOGEE COUNTY
CHEROKEE COUNTY



R1300

R1500. Safety precautions

AT-4 Range (PFC Charles George Medal of Honor AT-4 Range)

a. References:

- (1) FM 3-23.25.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0344751891.

c. Description and Capacity: This range is used to train soldiers on the skills necessary to defeat armored vehicles with light anti-armor weapons. Range consists of 2 firing points. Weapon/ammunition authorized for use on this range is AT-4/9mm sub caliber only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

(1) Camp Gruber Range Safety Briefing and Range Packet.

(2) HIGH EXPLOSIVE AMMUNITION IS RESTRICTED FROM USE ON THIS RANGE. ONLY 9mm SUBCALIBER AMMUNITION WILL BE UTILIZED.

(3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the AT-4 Range flagpole and the main Range Loop Road flagpole.

(4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

(c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions: All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.

g. Road Guard Requirements: None.

h. Impact Area closed during firing: See Range Surface Danger Zone.

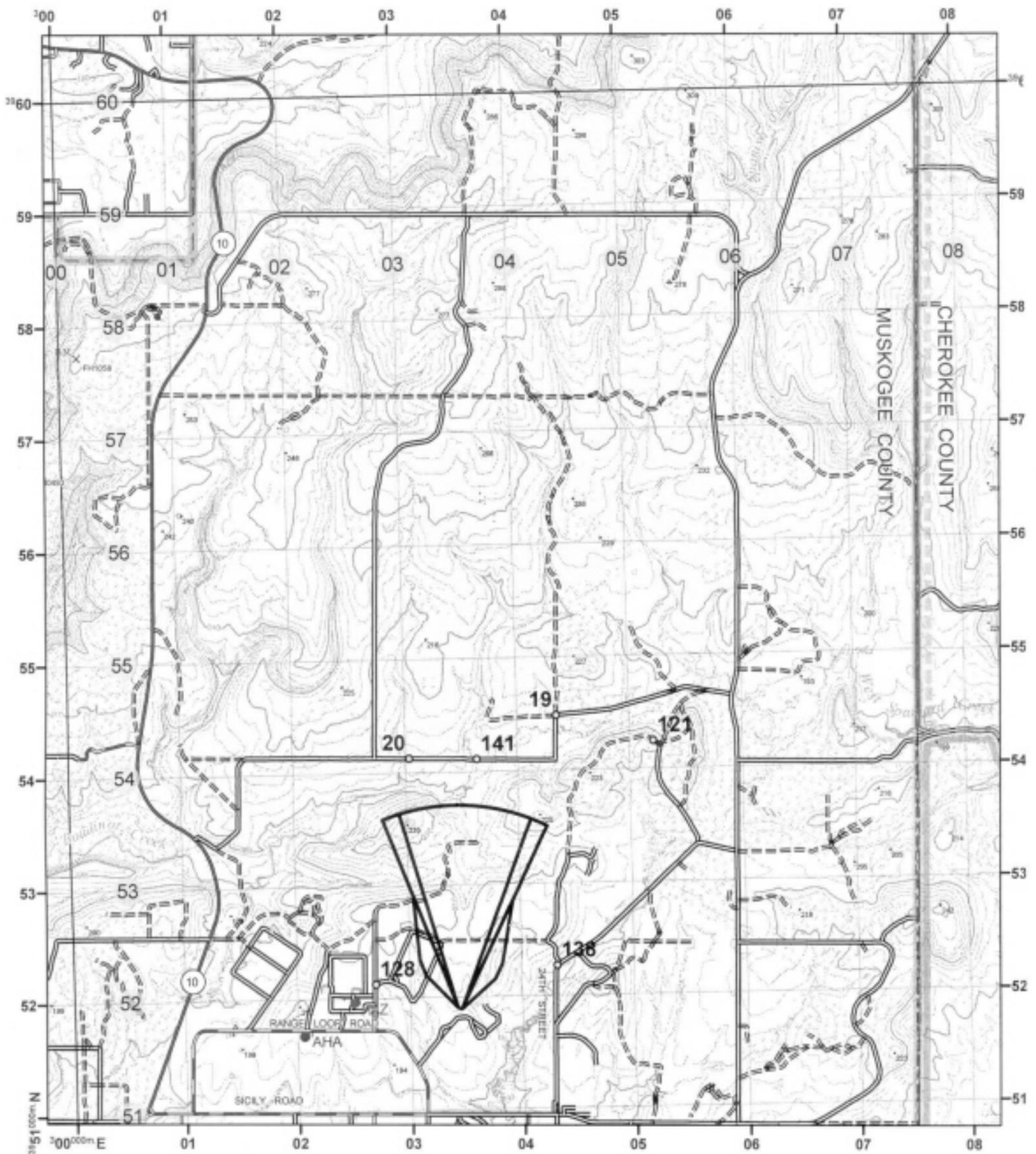
i. Range/s closed during firing: None.

j. Barriers:

(1) Gates: 19 and 20.

(2) Cable Gates 121, 128, 138, and 141.

AT4 RANGE SDZ



0 375 750 1,500 2,250 3,000 Meters



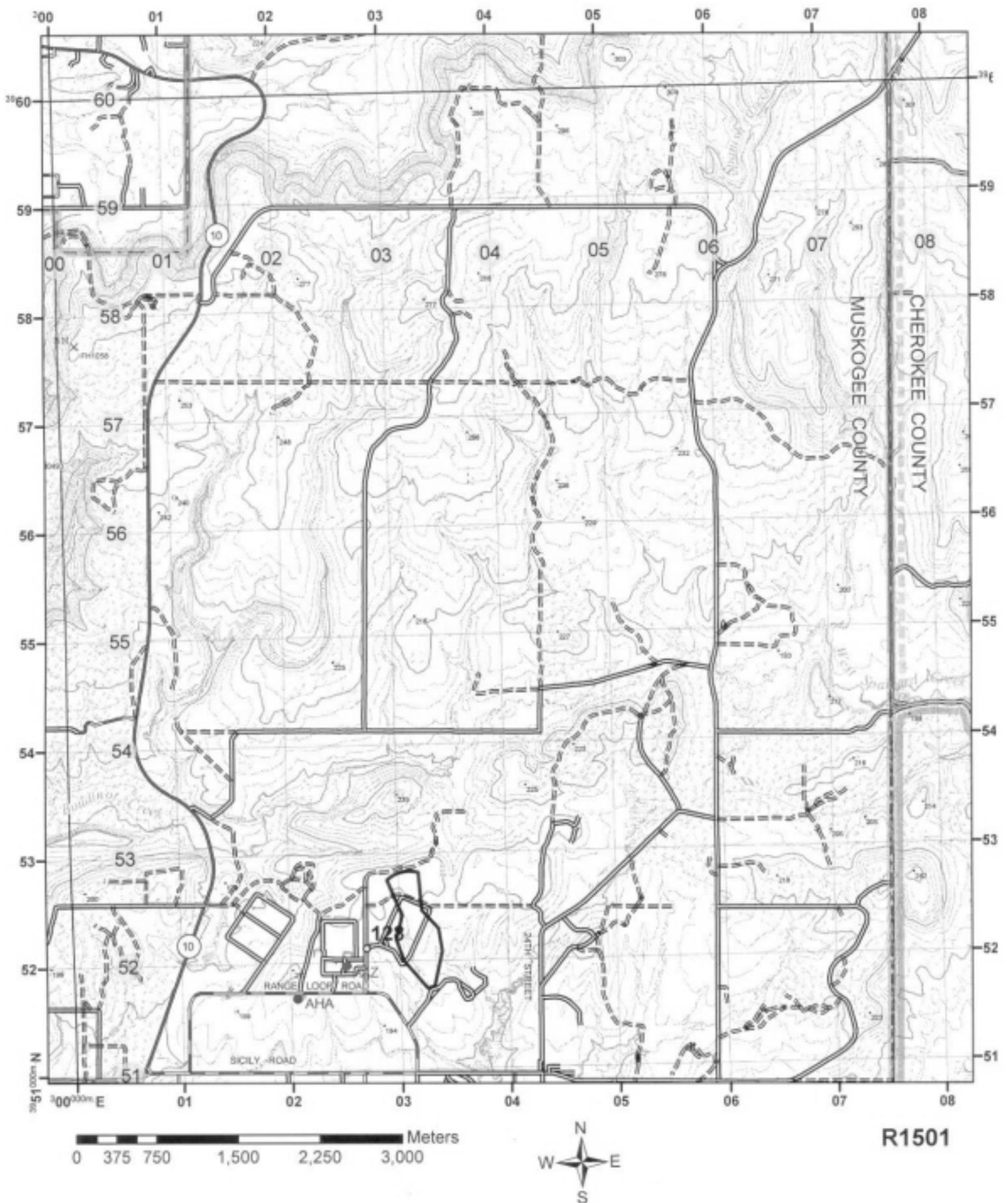
R1500

R1501. Safety precautions

25-Meter Shotgun Firing Range (Shotgun Qualification Range)

- a. References:
 - (1) STP 19-95C1-SM
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV0327851754.
- c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training qualification standards and qualifying with the Military Shotgun and the Combat Pistol Alternate qualification course. This range has 10 firing points (with barricades). Targets are mounted on fixed frames.
- d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Target frame height will not exceed 60 inches from the ground for each firing point being utilized.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Shotgun Range flagpole and the main Range Loop Road flagpole.
 - (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.
- f. Special Instructions:
 - (1) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone.
- i. Range/s closed during firing: None. (Note: MRF1 can be fired, but the Range access road, going down range, is off limits.)
- j. Barriers:
 - (1) Cable Gates: 128.

SHOTGUN QUAL RANGE SDZ



R1501

R1600. Safety precautions

Grenade Launcher Range (CPL Edward G. Wilkin Medal of Honor M203 Range)

a. References:

- (1) FM 3-22.31.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0332551698.

c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to engage and defeat stationary target emplacements with the 40mm Grenade Launcher. Range consists of 4 firing points. This range features 2 “zero” targets, both are marked with a white “Z” and located 200 meters from the firing line. This range is restricted to training practice ammunition (TP) only. Weapons/ammunition authorized for use on this range are M203/40mm TP only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Soldiers will not fire at any target within 100 meters.
- (3) HIGH EXPLOSIVE AMMUNITION IS RESTRICTED FROM USE ON THIS RANGE. ONLY TRAINING PRACTICE (TP) AMMUNITION WILL BE UTILIZED.

(4) Range flags will be flown from the M203 Range flagpole and the main Range Loop Road flagpole.
(5) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

- (6) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) All personnel on the firing line, 5 meters to each side, and within 5 meters to the rear of the firing line will wear helmets and approved single hearing protection.

(2) OIC/RSO will ensure only low-velocity training practice (TP) grenade cartridges are fired from M79 and M203 grenade launchers.

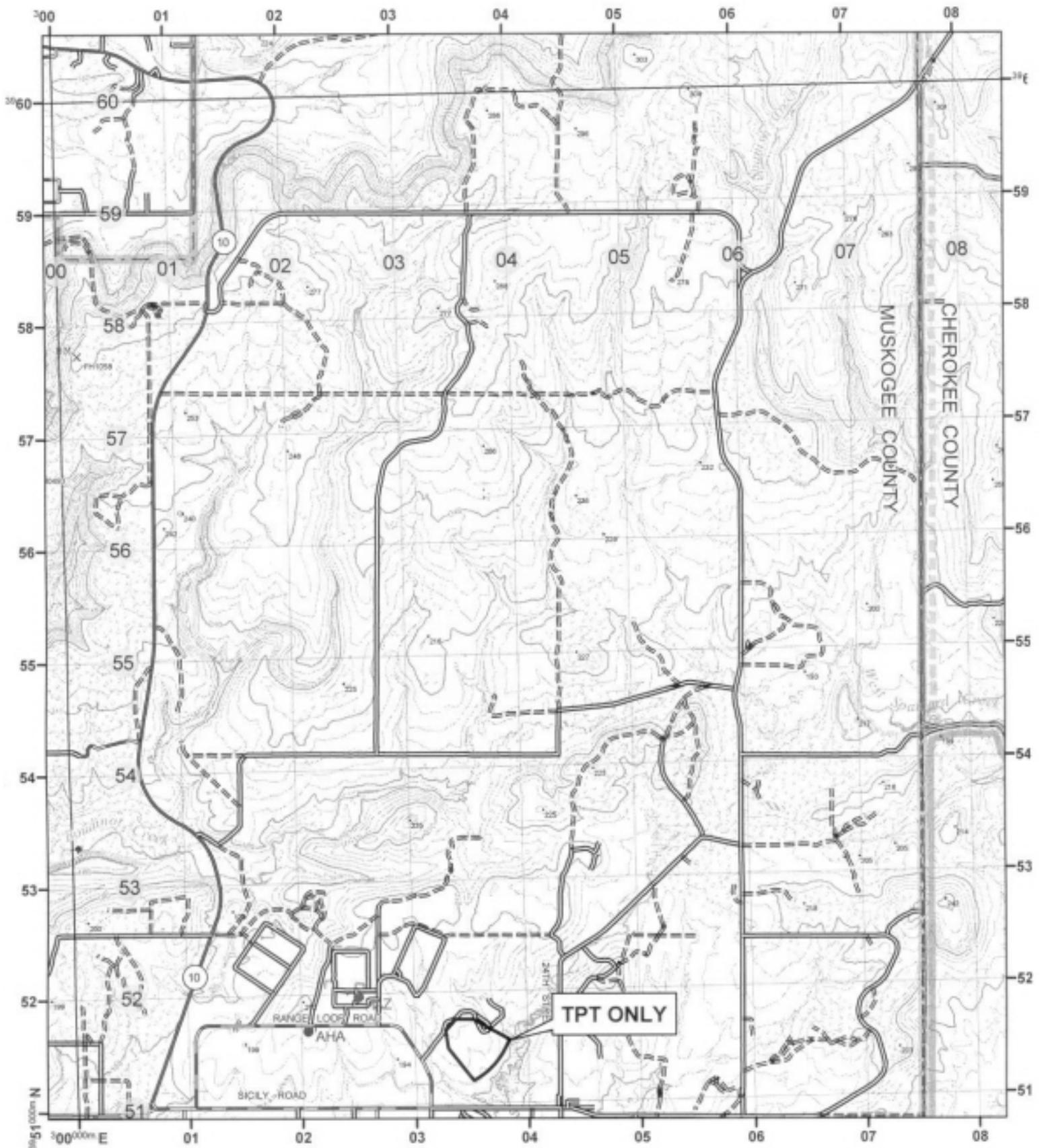
g. Road Guard Requirements: None.

h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing: None.

j. Barriers: None.

M203 RANGE SDZ



0 375 750 1,500 2,250 3,000 Meters



R1600

R2100. Safety precautions

Mortar Scaled Range (Mortar Subcal)

a. References:

- (1) FM 3-22.90.
- (2) FM 3-22.91.
- (3) AR 385-63.
- (4) DA Pam 385-63.
- (5) DA Pam 385-64.

b. Location: UV0342850860.

c. Description and Capacity: This range is used to train mortar crews on the skills necessary to apply fire mission data, engage and hit stationary targets in a tactical array. Range consists of two firing points and various targets ranging out to 600 meters. Weapons/ammunition authorized to fire: M224 (60mm)/M766 (Short Range) and M252 (81mm)/M880 (Short Range) rounds.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) NO HE AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE – ONLY SHORT RANGE

TARGET PRACTICE (SRTR).

(3) Range flags will be flown from the Mortar SRTR Range flagpole (gate entrance) and the main Range Loop Road flagpole

- (4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E6 or above. Using unit may request waive to lower these requirements based on unit organizational structure.

f. Special Instructions:

(1) All personnel who take part in mortar firing will wear approved protective helmets (USMC personnel will also wear protective vests).

(2) All personnel within the hearing hazard zone (as defined by mortar/cartridge FM) will wear approved hearing protection. If no zone can be determined, all personnel within 200 meters of firing will wear approved hearing protection.

(3) Firing through obstructions is prohibited.

(4) Using units will be required to recover fired/expended rounds. Recovery operations will not take place unless a "cease fire" is in effect and other range SDZs impacting the area are in a "Cold Status".

(5) All unit safety SOPs will be in effect while firing is conducted on this range.

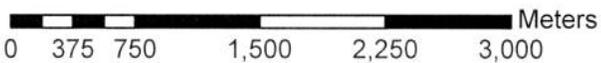
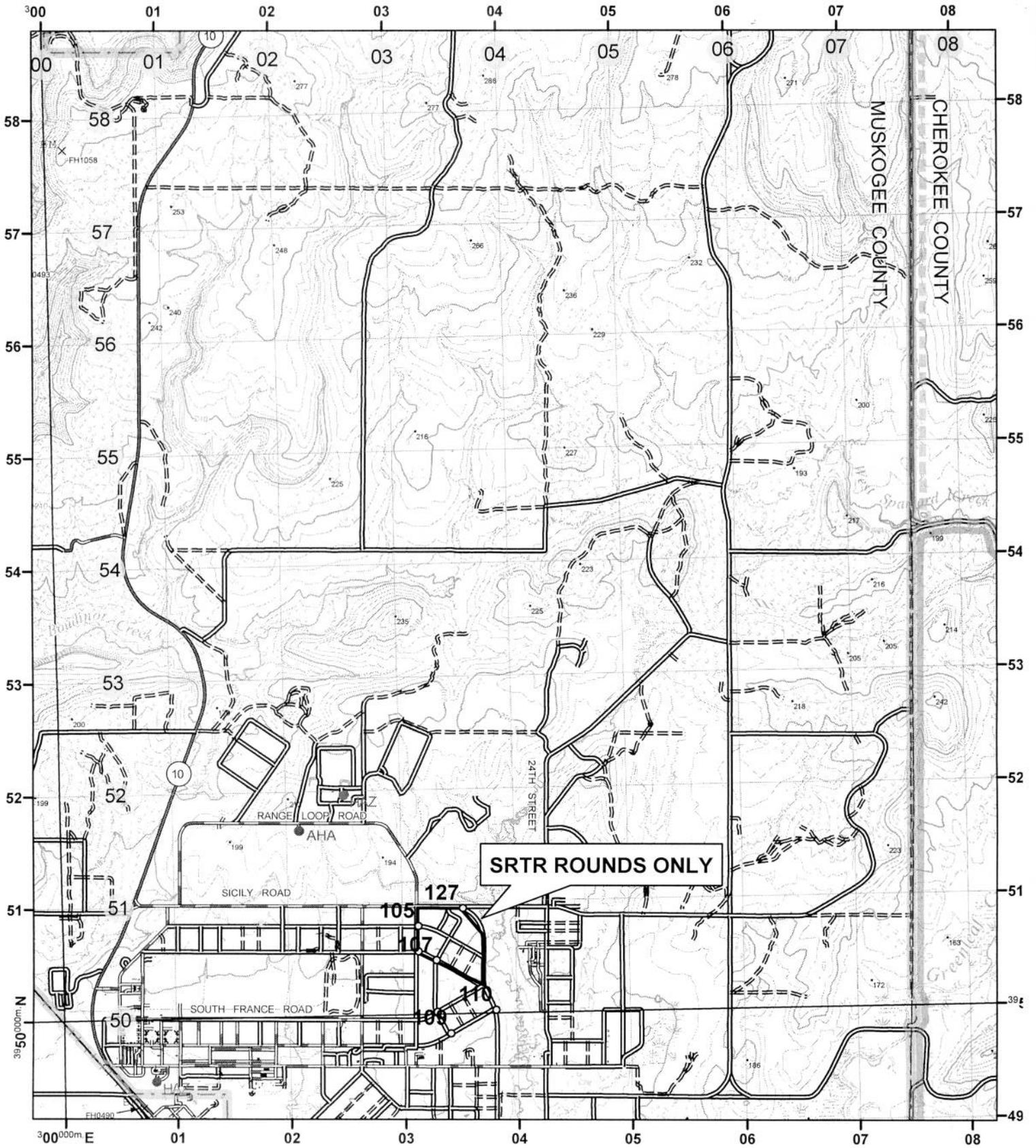
g. Road guard requirement: One, at UV03445070 blocking entrance to the range. Road guards are required to maintain FM communication with the Range OIC. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Safety Fan.

i. Ranges closed during operation: None.

j. Barriers: Cable gates 105, 106, 107, 108, 109, 110, and 127.

MORTAR SUBCAL RANGE SDZ



R2100

R2100. Safety precautions

Mortar FRTR Ranges 1 and 2

a. References:

- (1) FM 3-22.90.
- (2) FM 3-22.91.
- (3) AR 385-63.
- (4) DA Pam 385-63.
- (5) DA Pam 385-64.

- b. Location: FRTR 1 UK0365351086
FRTR 2 UK0553750906

c. Description and Capacity: This range is used to train mortar crews on the skills necessary to apply fire mission data, engage and hit stationary targets in a tactical array. Range consists of two FRTR Ranges with four firing points each and various targets ranging out to 3300 meters. Weapons/ammunition authorized to fire: M224 (60mm)/M769 (FRTR) and M252 (81mm)/M879 (FRTR) rounds.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.

(2) NO HE AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE – ONLY FAR RANGE TARGET PRACTICE (FRTP). ONLY CHARGE 1 WILL BE FIRED WITH THE 81mm FRTR ROUND and CHARGE 1 and 2 WITH THE 60mm FRTR ROUND
THE MINIMUM DISTANCE THAT WILL BE FIRED WITH THE 60mm FRTR ROUND WITH CHARGE 2 IS 1525 METERS IN ORDER NOT TO EXCEED THE AIRSPACE MAX ORD REQUIREMENT
THERE ARE 2 NO FIRE AREAS THAT ENCLOSE TOW MOVING TARGETS AND BUILDINGS.REFERENCE SDZ MAP FOR GRID LOCATIONS
THESE AREAS HAVE A STRICT 300 meter DIAMETER AND WILL BE LISTED ON THE RANGE CARD AND VERIFIED WITH RANGE CONTROL BEFORE FIRING

- (3) There are 4 established Forward Observer areas

- (a) OP 1 vic. UK0579250938 200m NO FIRE AREA
- (b) OP 2 vic. UK0515050942 200m NO FIRE AREA
- (c) OP 3 vic. UK0718051791 500m NO FIRE AREA
- (d) OP 4 vic. UK0307653546 300m NO FIRE AREA

(4) Range flags will be flown from the Mortar FRTR Range flagpoles (gate entrance) and the main Range Loop Road flagpole

- (5) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(6) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E6 or above. Using unit may request waive to lower these requirements based on unit organizational structure.

f. Special Instructions:

(1) All personnel who take part in mortar firing will wear approved protective helmets (USMC personnel will also wear protective vests).

(2) All personnel within the hearing hazard zone (as defined by mortar/cartridge FM) will wear approved hearing protection. If no zone can be determined, all personnel within 200 meters of firing will wear approved hearing protection.

(3) Firing through obstructions is prohibited.

(4) Using units will be required to recover fired/expended rounds. Recovery operations will not take place unless a "Cold Status" is in effect and other range SDZs impacting the area are in a "Cold Status".

(5) All unit safety SOPs will be in effect while firing is conducted on this range.

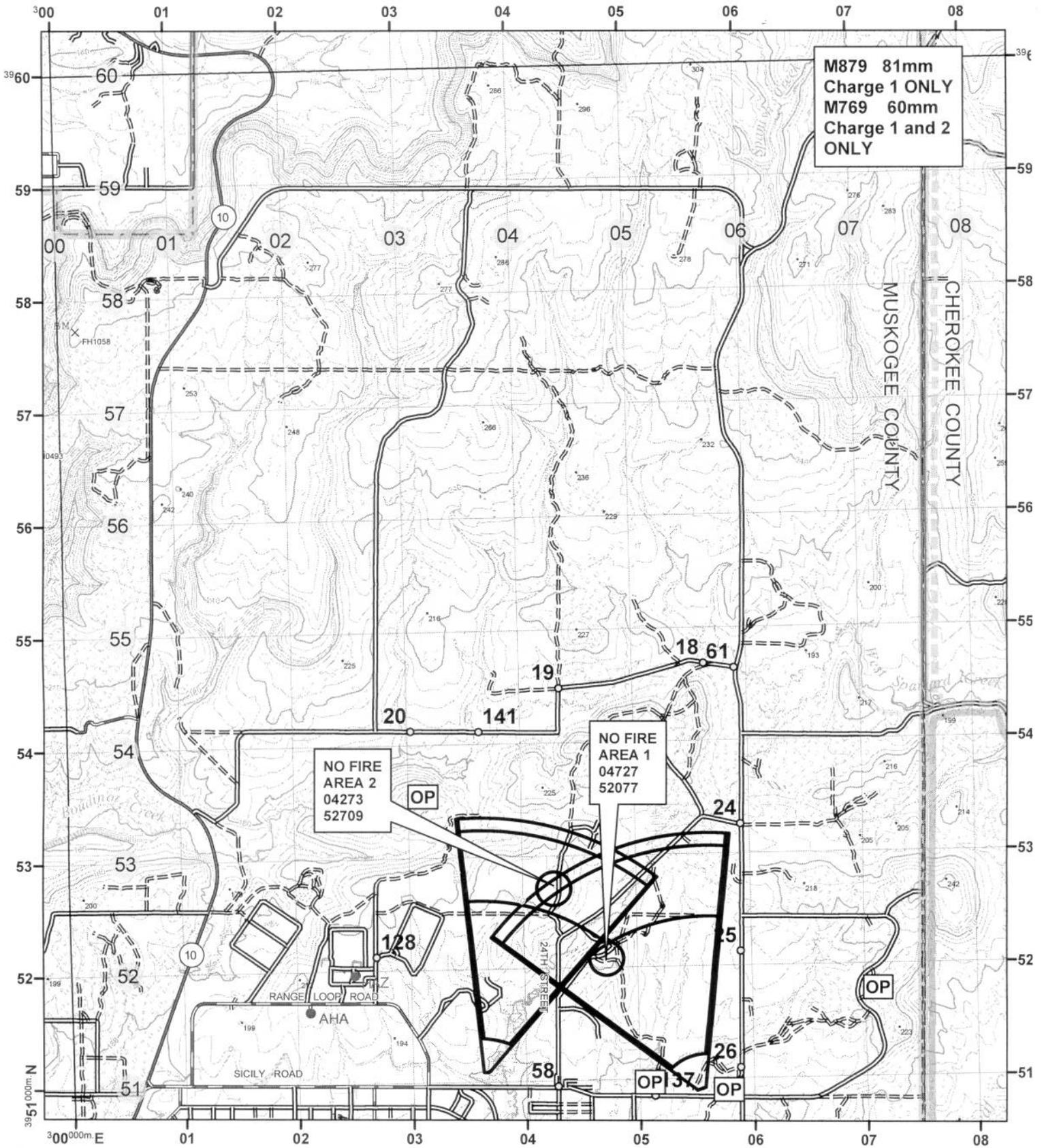
g. Road guard requirement: One, at UK0351851804 blocking entrance to the range. Road guards are required to maintain FM communication with the Range OIC. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Safety Fan.

i. Ranges closed during operation: AT4, Convoy Ambush, HG Live Fire, Light Demo (Breach Range).

j. Barriers: gates 18,19, 20,24, 25, 26, 58, 61, 128, 137,141.

MORTAR FRTR RANGE SDZ



0 375 750 1,500 2,250 3,000 Meters



R2100

R2200. Safety precautions

Hand Grenade Familiarization Range (HG Live fire)

a. References:

- (1) FM 3-23.30.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for grenade being utilized.

b. Location: UV0466052038.

c. Description and Capacity: This range is used to train and test individual soldiers in the employment of fragmentation hand grenades. Range consists of 4 throwing bays, 1 control bay and 1 ready bay. Throwing bay target areas are separated by an earthen berm. Each throwing bay area contains 1 target. Ammunition authorized for use on this range are the M67 fragmentation grenade.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

(1) Camp Gruber Range Safety Briefing and Range Packet.

(2) ONLY 1 GRENADE MAY BE THROWN AT A TIME ON THIS RANGE. RANGE OIC WILL VERIFY DETONATION OF EACH GRENADE.

(3) NO DIRECT VIEWING IS AUTHORIZED ON THIS RANGE. MIRRORS ARE PROVIDED ON THE CONTROL BAY FOR SUPERVISION OF THE RANGE.

(4) RANGE OIC WILL ENSURE COMPLETE DETONATION OF EACH GRENADE. IN THE EVENT THAT A GRENADE FAILS TO DETONATE (DUD), RANGE OPERATIONS WILL CEASE (NO FURTHER THROWING OF GRENADES IN THE AREA OF THE DUD) AND THE RANGE OIC WILL CONTACT RANGE CONTROL. NO PERSONNEL ARE AUTHORIZED TO GO DOWNRANGE, ONLY EOD PERSONNEL ARE AUTHORIZED DOWNRANGE (APPENDIX B FM 3-23.30 CONTAINS DETAILED SAFETY PROCEDURES TO FOLLOW).

(5) Range flags will be flown from the HG Live-Fire Range flagpole and the main Range Loop Road flagpole.

(6) Grenades will not be thrown into standing water, deep snow or dense vegetation.

(7) Range OIC will ensure all personnel are proficient in the safety precautions used for handling and throwing grenades before live grenade training begins. Successful completion of practice grenade training (mock bay) is mandatory prior to live grenade training.

(8) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

I Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(9) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) All personnel on the firing line and within the 150-meter danger area will wear approved protective helmets, protective body armor, single hearing protection and proper eye protection.

(2) Range OIC (E7 or above), Safety Officer (E6 or above) and Assistant Range Safety Officers (E6 or above) for live grenade training events must be certified to perform their duties. The following actions will be included in the certification of these individuals: actions in the event of a dropped grenade, short throw, grenade thrown other than downrange, surface danger zone, control of observers, misfire and dud procedures, arming and throwing techniques and pre-live bay training requirements.

(3) Range OIC must submit a risk assessment worksheet addressing the range operation prior to the conduct of the event. Range Control will not permit the range to go 'hot' without a copy of this assessment on file at Range Control (bldg. 740). Appendix B, FM 3.23-30 provides an example risk assessment for a grenade range event.

(4) Personnel inside the Safety and Ready Bays must be at least 18" inside from the rear of each bunker.

g. Road Guard Requirements: One, at North side of range to prevent entry from the north.

Road guard is required to maintain FM communication with the Range OIC. Road guard will be

required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing: MRF-2, Zero-2, MK-19, TOW MILES, TOW Live Fire, and React to Convoy Ambush Range.

j. Barriers;

(1) Gate: 51.

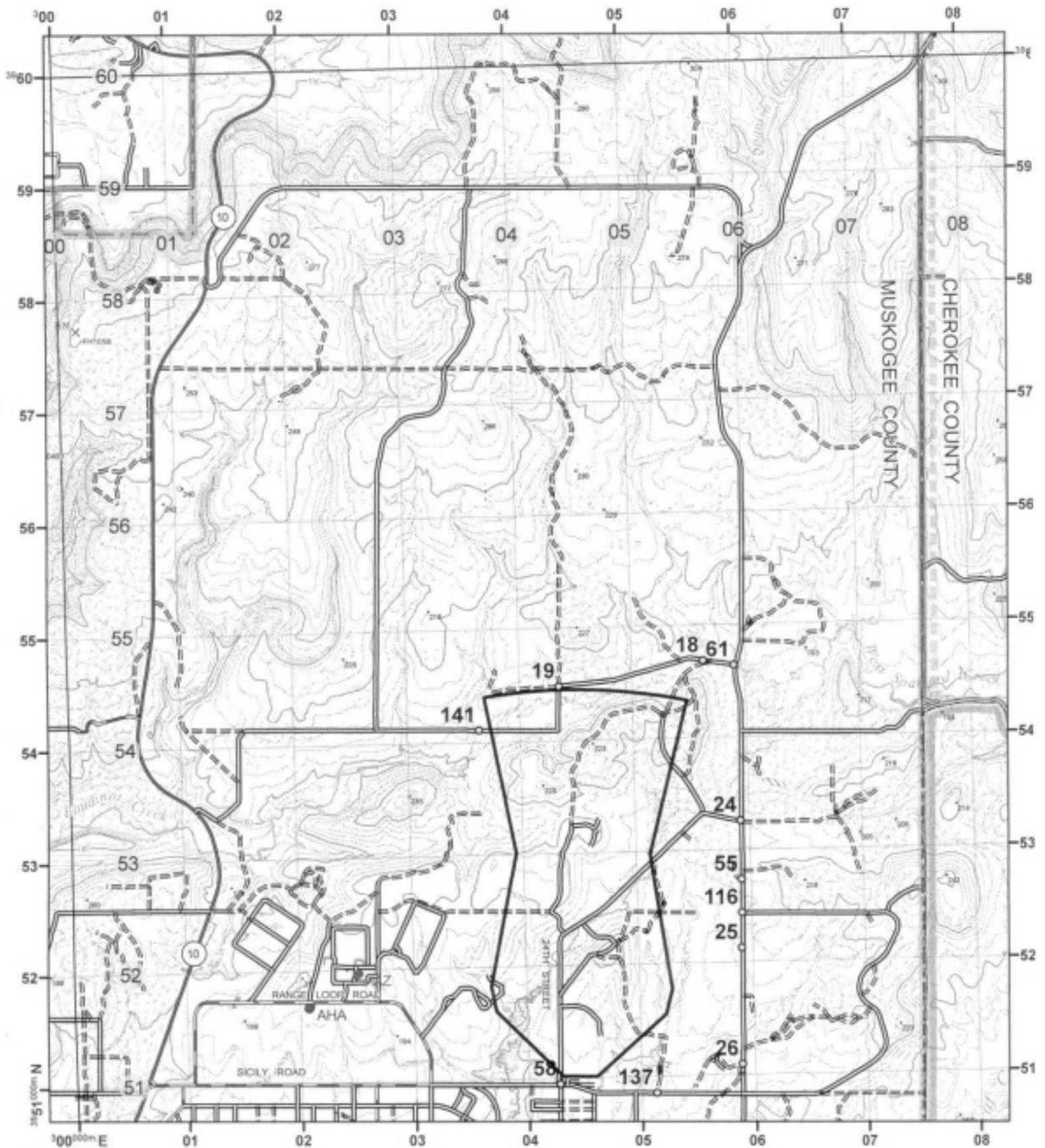
(2) Cable Gate 137.

R2300. Safety precautions

Modified Record Fire Range Two (2LT Almond E. Fisher Medal of Honor MRF-2 Range)

- a. References:
 - (1) FM 3-22.9.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV0444851015.
- c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to identify, engage and defeat stationary infantry targets for day/night qualification requirements with the M16 and M4 rifles. This range has 16 firing points. Weapons/ammunition authorized for use on this range are M16 series and M4/5.56mm, also the M249/5.56mm is authorized on center 8 lanes.
- d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the MRF 2 Range flagpole and the main Range Loop Road flagpole.
 - (4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.
- f. Special Instructions: All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone.
- i. Range/s closed during firing: Hand Grenade Familiarization Range and the React to Convoy Ambush Range.
- j. Barriers:
 - (1) Gates: 18, 19, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates: 116, 137, and 141.

MRF2 RANGE SDZ



R2300

R2600. Safety precautions

25-Meter Firing Range (Zero 2 Range)

a. References:

- (1) FM 3-22.9.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) Specific TM and FM for the weapon being utilized.

b. Location: UV0469050933.

c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifles and the M249 SAW machine gun. This range has 32 firing points (with foxholes). Targets are mounted on fixed frames. This range is used for rifle 25 meter zeroing range. Weapons/ammunition authorized for use on this range are M16 series and M4/5.56mm, M249/5.56mm.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Target frame height will not exceed 48 inches from the ground for each firing point being utilized.
- (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero 2 Range flagpole and the main Range Loop Road flagpole.

(4) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions: All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear helmets and approved single hearing protection.

g. Road Guard Requirements: None.

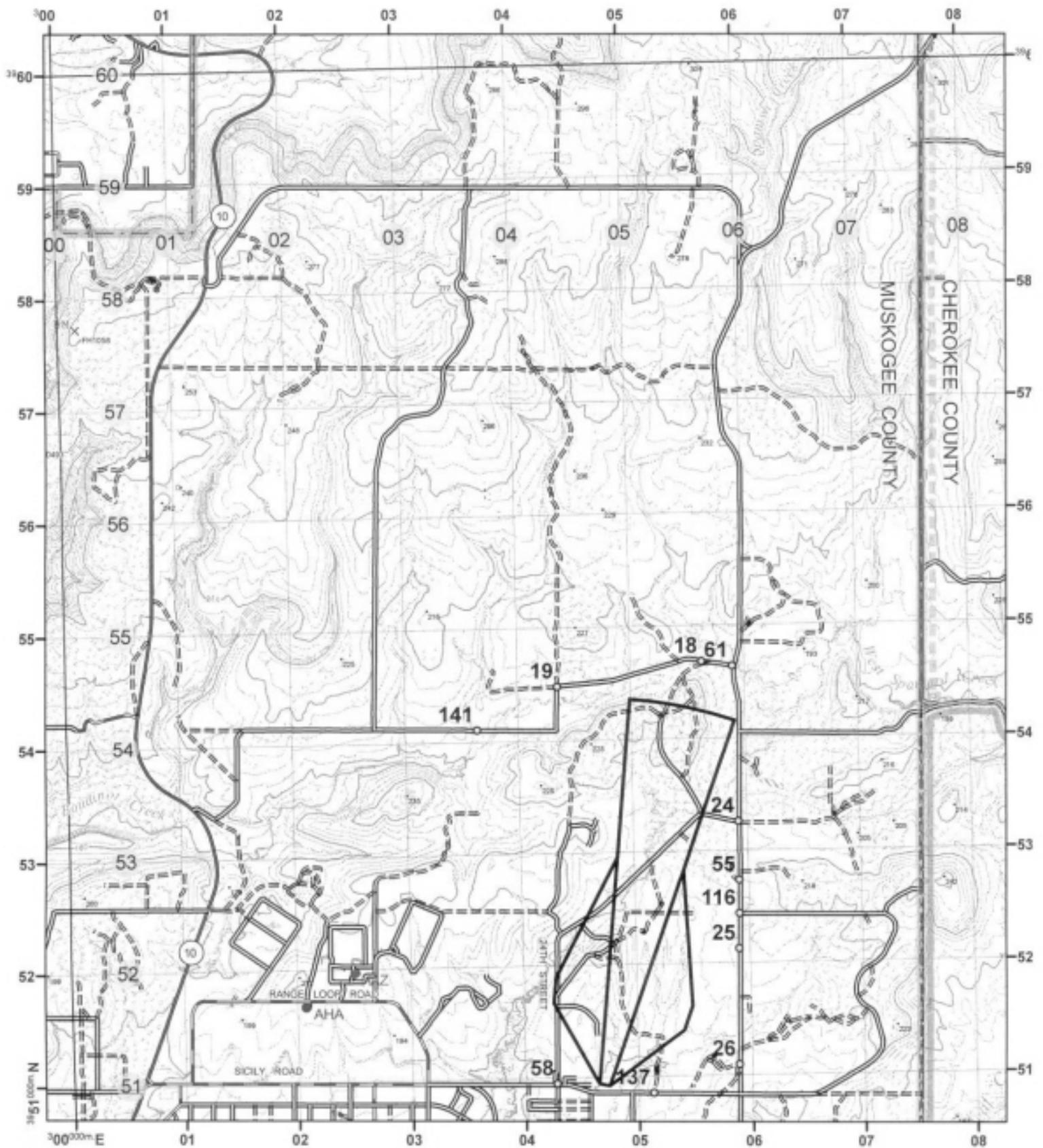
h. Impact Area closed during firing: See Range Surface Danger Zone.

i. Range/s closed during firing: Hand Grenade Familiarization and React to Convoy Ambush.

j. Barriers:

- (1) Gates: 18, 19, 24, 25, 26, 55, 58, and 61.
- (2) Cable Gates 116, 137, and 141.

ZERO 2 RANGE SDZ



0 375 750 1,500 2,250 3,000 Meters



R2600

R2900. Safety precautions

Breach Range (Breach Range)

a. References:

- (1) FM 5-250.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) DA Pam 385-64.
- (5) TC 90-1.
- (6) Pertinent EOD publications

b. Location: UV0583952022.

c. Description and Capacity: This range is used to train individual soldiers on the technical aspects of breaching techniques. It is also used to train tactics, techniques, and procedures and explosive techniques not trained on any other type of facility. Blasts are restricted to a maximum charge of 1lb of material per shot. Total weight of explosives maintained on the range may not exceed 25lbs (net explosive weight/NEW).

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) A MAXIMUM OF ONE POUND (LB) MATERIAL MAY BE DETONATED AT A TIME ON THIS RANGE.
- (3) A MAXIMUM OF TWENTY-FIVE (25) LBS OF TOTAL EXPLOSIVES MAY BE LOCATED ON THIS RANGE.
- (4) Range flags will be flown from the Breach Range flagpole (gate entrance) and the main Range Loop Road flagpole.
- (5) Only mission essential personnel will be allowed in the SDZ during firing.
- (6) Mixing of live and inert demolitions for training is prohibited.
- (7) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.

I Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(8) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above. Both OIC and RSO must have commander's certification concerning demolition proficiency.

f. Special Instructions:

(1) All personnel on the range and within the surface danger zone (SDZ), based on the maximum planned blast as listed on the demolition plan, will wear approved protective helmets, protective body armor, single hearing protection and proper eye protection. Helmets, ear and eye protection will also be worn while in the confines of the bunkers. Body armor may be removed while inside the ready bunker, but will be worn while inside the OIC bunker.

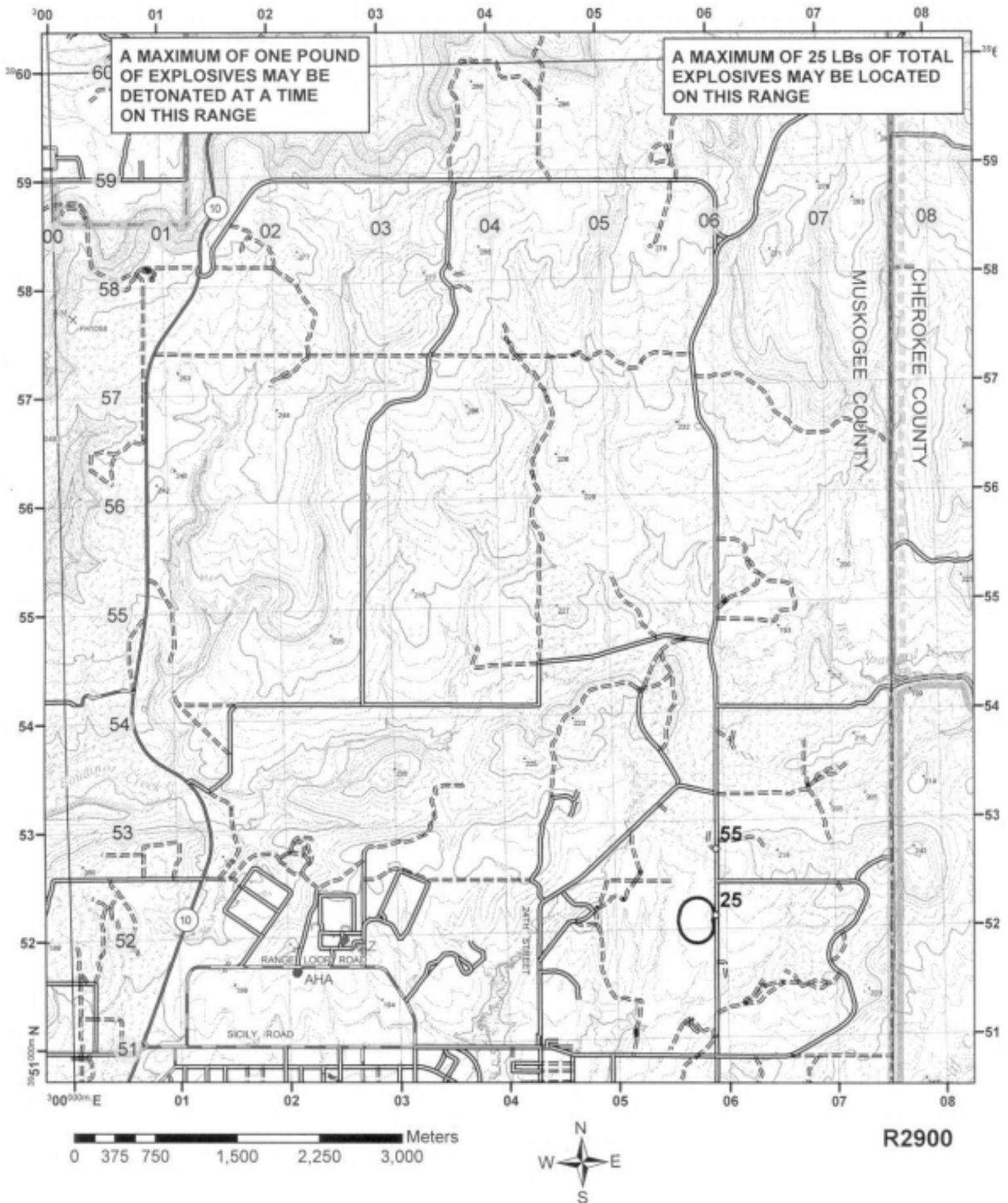
(2) Range OIC (E7 or above), Safety Officer (E6 or above) and Assistant Range Safety Officers (E6 or above) must be demolition certified to perform their duties.

(3) Range OIC must submit a demolition plan (IAW FM 5-250) and a risk assessment worksheet (IAW FM 100-14) addressing the range operation prior to the conduct of the event. Range Control will not permit the range to go 'hot' without a copy of these documents on file at Range Control (bldg. 740).

g. Road guard requirement: One at UV0720152423. Road guard is required to maintain FM communication with the Range OIC. Road guard will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

- h. Impact Area closed during operation: See Range Safety Fan.
- i. Ranges closed during operation: Heavy Demolition Range, TOW Live Fire, MK19, ISBC – SOSO, UAC Station #3 – Grenadier Gunnery, and TOW MILES.
- j. Barriers:
 - (1) Gates: 25, and 55.

BREACH RANGE SDZ



R3000. Safety precautions
Heavy Demolition Range (Heavy Demo)

a. References:

- (1) FM 5-250.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) DA Pam 385-64.
- (5) Pertinent EOD publications.

b. Location: UV0638853230.

c. Description and Capacity: This range is used to train individual soldiers on the employment techniques of explosives and demolitions. Range consists of 1 open blast area. Two shelters are located at 175M and 250M from the blasting area. This range is restricted to a maximum charge of 250 lb of non-fragmenting material per surface shot, and 500 lb of non-fragmenting material per subsurface shot. Fragmenting material (claymores/cutting charges) is prohibited on this range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet.

(2) A MAXIMUM OF 250 LBS OF NON-FRAGMENTING MATERIAL MAY BE SURFACE DETONATED AT A TIME ON THIS RANGE.

(3) A MAXIMUM OF 500 LBS OF NON-FRAGMENTING MATERIAL MAY BE SUB-SURFACE DETONATED AT A TIME ON THIS RANGE.

(4) Range flags will be flown from the Heavy Demo Range flagpole (range entrance) and the main Range Loop Road flagpole.

(5) Only mission essential personnel will be allowed in the SDZ during firing.

(6) Mixing of live and inert demolitions for training is prohibited.

(7) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

(c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above. Both OIC and RSO must have commander's certification concerning demolition proficiency.

f. Special Instructions:

(1) All personnel on the range and within the surface danger zone (SDZ), based on the maximum planned blast as listed on the demolition plan, will wear approved protective helmets, protective body armor, single hearing protection and proper eye protection. Helmets, ear and eye protection will also be worn while in the confines of the bunkers. Body armor may be removed while inside the ready bunker, but will be worn while inside the OIC/blasting bunker.

(2) Range OIC (E7 or above), Safety Officer (E6 or above) and Assistant Range Safety Officers (E6 or above) must be demolition certified to perform their duties.

(3) Range OIC must submit a demolition plan (IAW FM 5-250) and a risk assessment worksheet (IAW FM 100-14) addressing the range operation prior to the conduct of the event. Range Control will not permit the range to go 'hot' without a copy of these documents on file at Range Control (bldg. 740).

(4) Personnel inside the OIC/Blast and Ready Bunkers must be at least 18" inside from the rear of each bunker.

g. Road guard requirement: One at UV06005320, east of Gate 24, blocking entry on the range. Road guard is required to maintain FM communication with the Range OIC. Road guard may be moved, based on total weight of individual shots. This will be coordinated during the review of the demolition plan at Range Control. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs

and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Safety Fan.

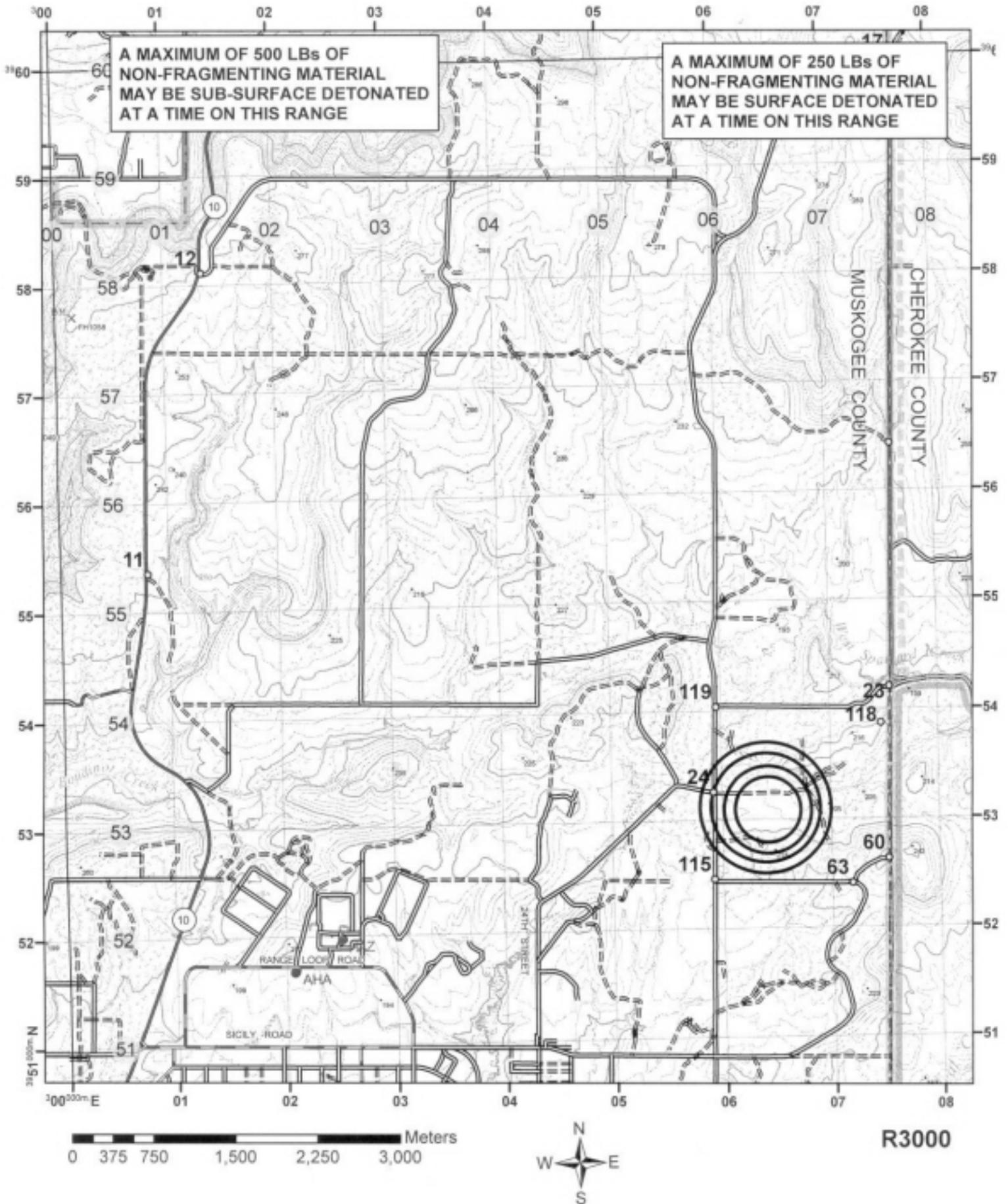
i. Ranges closed during operation: Breach Range, TOW Live Fire, Sniper Field Fire, and TOW MILES.

j. Barriers:

(1) Gate: 11, 12, 17, 22, 23, 24, 60, 63

(2) Cable Gates: 115, 118, and 119.

HEAVY DEMO RANGE SDZ



R3100. Safety precautions

TOW (TP) Missile Range (TOW Live-Fire)

a. References:

- (1) FM 3-22.34.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) DA Pam 385-64.

b. Location: UV072051769.

c. Description and Capacity: This range is used to train and test soldier on the skills necessary to employ weapons, identify, track, engage and defeat stationary and moving armor targets presented individually or as part of a tactical array. Range consists of two (2) firing points and various targets (stationary/moving) arrayed at 2000M to 2750M. Weapons/ammunition authorized to fire: TOW/Target Practice (TP) round.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Personnel will not enter the range fan without contacting Range Control. Several live-fire ranges overlay this range fan. The Range OIC must get approval from Range Control prior to moving downrange (i.e. for targetry set-up/repair/recovery).
- (3) NO HE AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE – ONLY TARGET PRACTICE (TP).

(4) Range flags will be flown from the TOW Live-Fire Range flagpole (East of firing points), the TOW MILES range flagpole (intersection of Sicily/North-South road) and the main Range Loop Road flagpole.

- (5) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

- (1) Before firing any missile, the SDZ will be cleared of all nonessential personnel.
- (2) All personnel on the range will wear Kevlar helmets.
- (3) Personnel within 75 meters from each firing point will wear approved hearing protection and eye protection.
- (4) Personnel located 100 meters to each side and 200 meters to the rear of the firing points will wear approved hearing protection. USMC personnel (including gunners) within this area will wear helmets and protective vests.
- (5) Assistant Range Safety Officers (ARSO) will be positioned at each weapon system to ensure the gunner has identified the range safety limit markers. During live fire exercises, the ARSO will verify that each gunner's line-of-sight to the target is within the range safety limit markers.
- (6) During periods of limited visibility, portable limit beacons will be placed on the left and right limit markers. Range OIC will coordinate issue of these beacons from Range Control.
- (7) During live-fire exercises, electrical power will be shut off to all overhead power lines that are within the range impact area. Range OIC will verify this with Range Control prior to conduct of fire on the range.

(8) All missile guidance wire must be retrieved from the range impact area by using unit personnel prior to clearing the range. North/South Range Road and Pistol Loop Road will remain closed to traffic after firing until all wire has been retrieved. Range Control will reopen the roads to traffic when the range is cleared.

g. Road guard requirement:

- (1) One at Cable Gate 104.
- (2) One at UV0720152423 (vic. Fire Tower Hill).
- (3) One at Cable Gate 113.

Road guards are required to maintain FM communication with the Range OIC. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

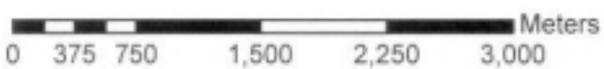
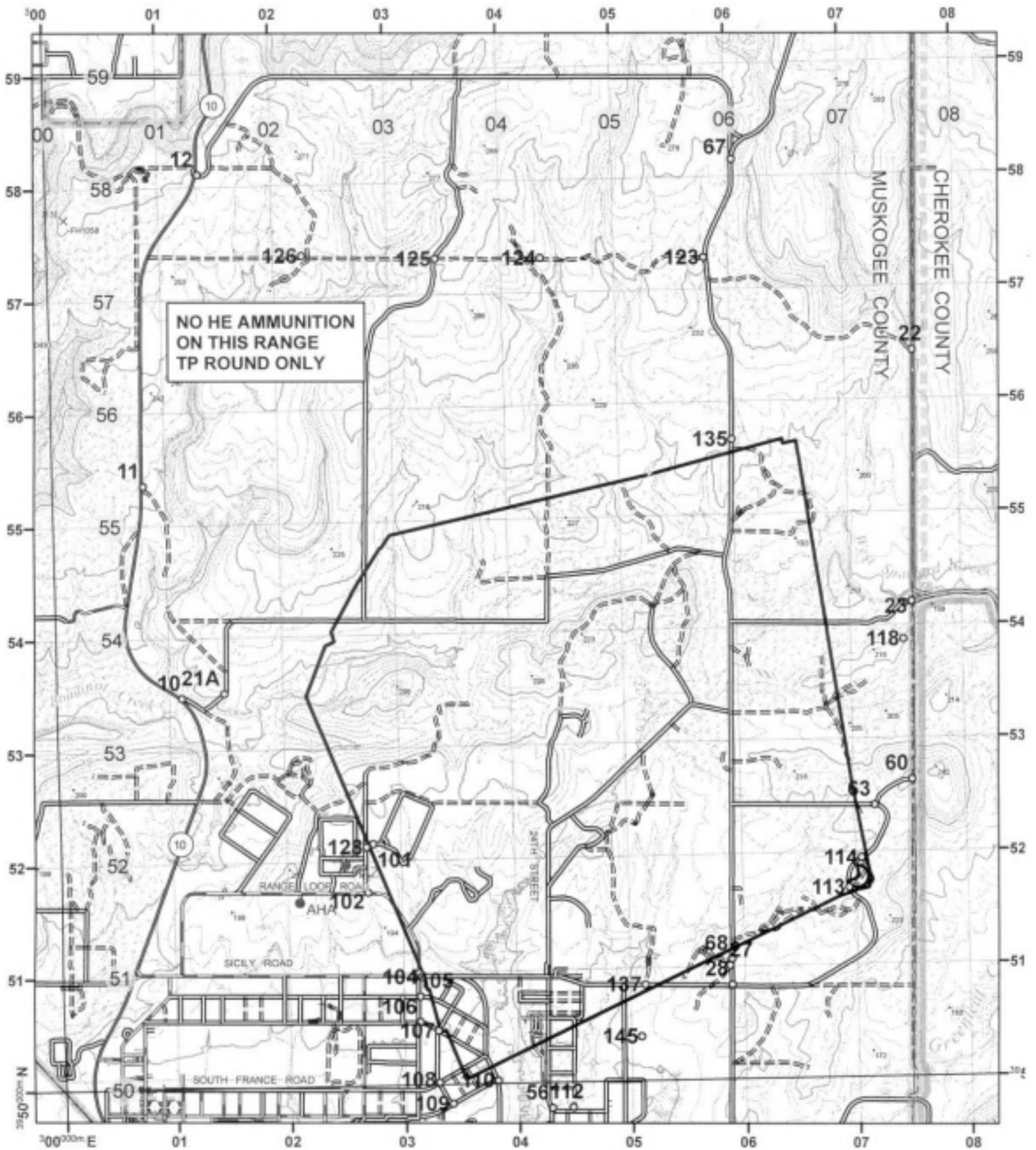
h. Impact Area closed during operation: See Range Safety Fan.

i. Ranges closed during operation: Sniper Field Fire, Heavy Demolition, Breach Range, TOW MILES, MK19, Zero 2, MRF-2, MOUT CTF, M203 GL, AT-4, MRF-1, ISBC- SOSO, UAC Station #3 – Grenadier Gunnery, ISBC – Squad Assault, Hand Grenade Familiarization, and Mortar SRTR.

j. Barriers:

- (1) Gates: 10, 11, 12, 17, 21A, 22, 23, 27, 28, 56, 60, 67, and 68.
- (2) Cable Gates: 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113, 114, 118, 122, 123, 124, 125, 126, 128, 135, 137, and 145.

TOW LIVE FIRE RANGE SDZ



R3100

R3200. Safety precautions

MK-19 40-MM Grenade Machine Gun Range (MK 19)

a. References:

- (1) FM 3-22.27.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) DA Pam 385-64.

b. Location: UV0517351004.

c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary for firing the MK-19. The soldiers practice target observation, fire adjustment, machine gun traversing, searching, developing speed during operation and obtaining an accurate burst. Range consists of 2 lanes with point and area targets. Weapons and ammunition authorized are MK19/ training practice rounds (TP) only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.

(3) NO HE AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE – ONLY TRAINING PRACTICE ROUNDS (TP).

(4) Range flags will be flown from the MK19 Range flagpole (gate 137 entrance) and the main Range Loop Road flagpole.

(5) A medical aid man/medic must be present on the range during the conduct of live firing. Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(6) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) All personnel on the firing line and within the 20-meter radius of each weapon system will wear approved protective helmets, gloves, protective body armor, single hearing protection, and proper eye protection.

(2) Daily noise exposure limit within the contour hazard area (20 meter radius) is 1000 rounds per day.

(3) Targets will be engaged only at ranges greater than 80 meters.

(4) Firing through obstructions is prohibited.

(5) Using units will be required to recover fired/expended rounds, under the supervision of Range Control personnel, at the completion of the range event. All Army personnel recovering 40-MM M918 TP projectiles will follow the procedures outlined in TB 9-1310-251-10. The use of protective equipment listed in TB 9-1310-251-10 when recovering rounds is mandatory.

g. Road guard requirement: None.

h. Impact Area closed during operation: See Range Safety Fan.

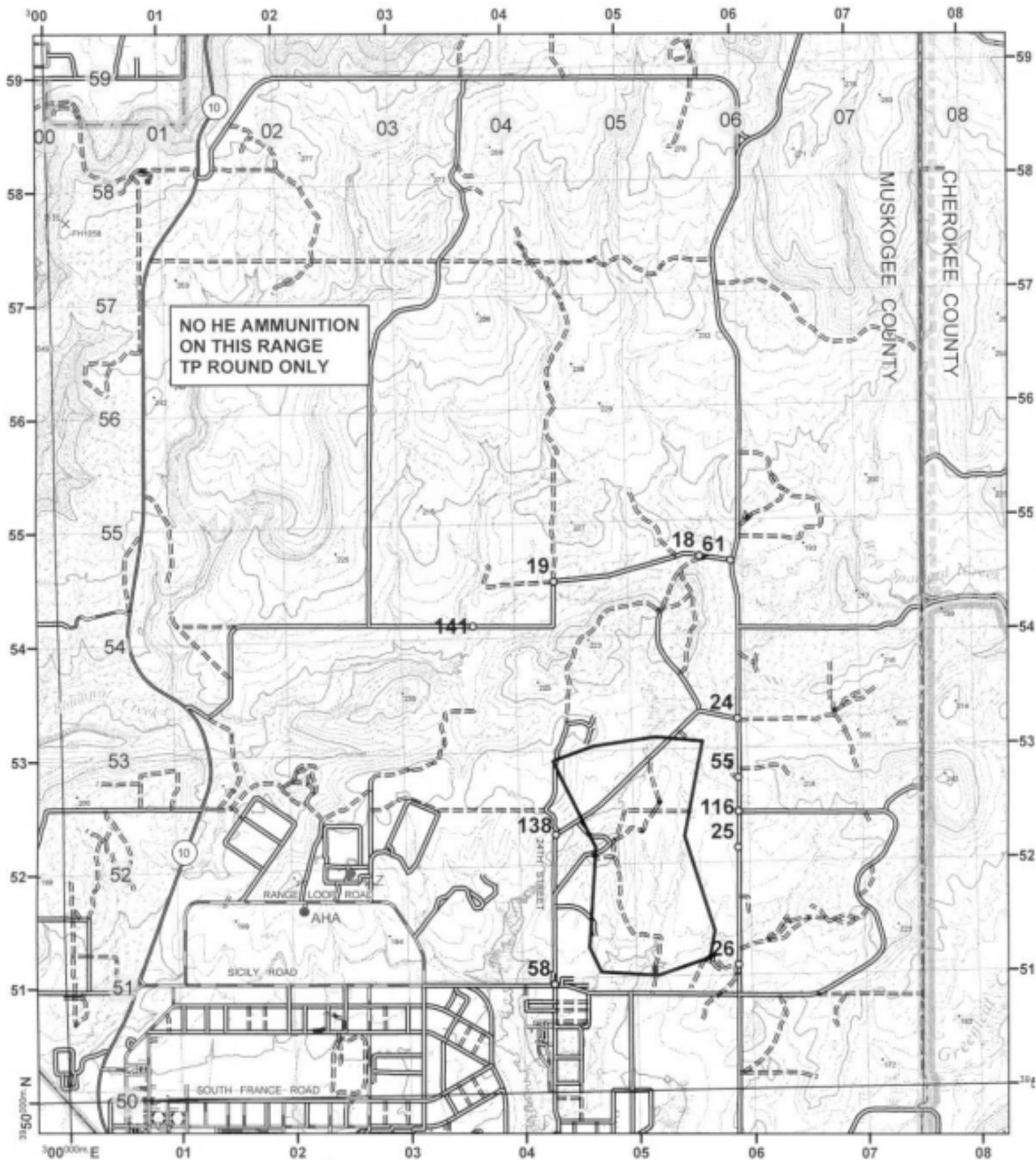
i. Ranges closed during operation: TOW MILES, TOW Live Fire, Breach Range, Hand Grenade Familiarization (Live), and Urban Assault Course/Station #3 – Grenadier Gunnery.

j. Barriers:

(1) Gates: 18, 19, 24, 25, 26, 55, 58 and 61.

(2) Cable Gates: 116, 138, and 141.

MK19 RANGE SDZ



R3200

R3300. Safety precautions

Live Fire Ambush on a Vehicle Convoy (Convoy Ambush)

a. References:

- (1) FM 3-22.9.
- (2) FM 3-22.31.
- (3) FM 3-22.68.
- (4) FM 3-23.25.
- (5) AR 385-63.
- (6) DA Pam 385-63.

b. Location: UV0376558104.

c. Description and Capacity: This range is used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage and defeat stationary and moving infantry and vehicle targets. Target array presents a moving enemy convoy. Weapons/ammunition authorized on this range are: M4/5.56mm, M249/5.56mm, M240/7.62mm, AT-4/9mm sub cal, M203/40mm TP and M18A1 Claymore mine.). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from the range (entrance) and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above. Company level exercises require an Officer/Warrant Officer as the OIC and an E7 as the Safety Officer.

f. Special Instructions:

(1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.

(2) The Range Safety Officer is responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issuance of the range.

(3) Each using unit's command will develop a detailed, written training plan, which will be submitted, to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:

- (a) Maneuver and fire support plan.
- (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
- (c) Command, control, and communications plan.
- (d) Training areas/facilities required.
- (e) Targetry required.
- (f) Safety plan.
- (g) Observer/controller plan.

(4) Minimum uniform requirements for this range will include Kevlar helmet, hearing protection, eye protection, and protective vests as a part of each individual's fighting load components. Personnel who are within the 150 meter danger area (hand grenade) are also required to maintain this uniform.

(5) When using M18 Claymore mines, the following restrictions apply:

(a) Personnel are not allowed within 16 meters from the rear of the mine.

(b) Firing personnel may occupy an area between 16-100 meters if they are located in a covered position, lying prone in a depression, or behind a physical barrier.

(6) Overhead firing techniques will not be conducted on this range.

(7) Individual/weapon safety requirements:

(a) Each weapon will have a safety function check prior to issue of live ammunition on the range.

(b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months. Soldiers using Claymore mines are required to have conducted a familiarization (live) event within the previous 12 months.

(c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodged) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

g. Road guard requirement:

(1) One at Cable Gate 132.

h. Impact Area closed during operation: See Range Surface Danger Zone.

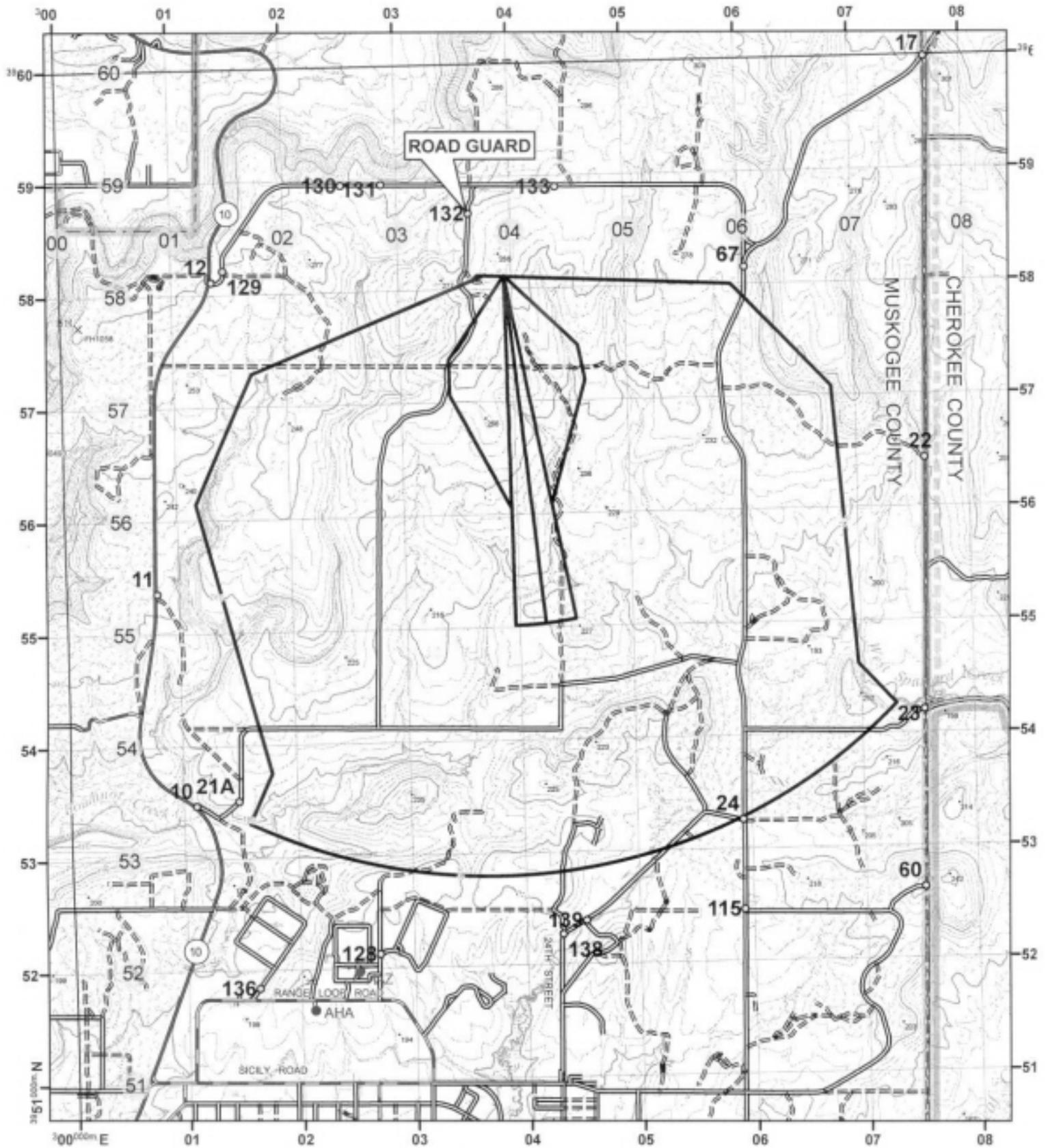
i. Ranges closed during operation: Fire and Maneuver (Buddy Team), Machine Gun, and Sniper Field Fire ranges.

j. Barriers:

(1) Gates 10, 11, 12, 17, 21A, 22, 23, 24, 60, and 67.

(2) Cable Gates: 115, 122, 128, 129, 130, 131, 132, 133, 136, 138, and 139.

CONVOY AMBUSH SDZ



0 375 750 1,500 2,250 3,000 Meters



R3300

R3400. Safety precautions

React to Convoy Ambush

a. References:

- (1) FM 3-22.9.
- (2) FM 3-22.27.
- (3) FM 3-22.31.
- (4) FM 3-22.69.
- (5) FM 3-23.5.
- (6) FM 3-23.30.
- (7) FM 3-23.35.
- (8) AR 385-63.
- (9) DA Pam 385-63.

b. Location: UV0442952360.

c. Description and Capacity: An Infantry Squad Battle Course used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage and defeat stationary and moving infantry and stationary armor targets in a tactical array. Weapons/ammunition authorized on this range are: M4/5.56mm, M249/5.56mm, M240/7.62mm, M9/9mm, MK19/40mm TP only, M203/40mm TP only, AT4/9mm sub caliber only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags (3) will be flown from; MRF-2 range (entrance), the Hand Grenade Live Fire range, and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above. Company level exercises require an Officer/Warrant Officer as the OIC and an E7 as the Safety Officer.

f. Special Instructions:

- (1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.
- (2) The Range Safety Officer is responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issue of the range.
- (3) Each using unit's command will develop a detailed, written, training plan, which will be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:
 - (a) Maneuver and fire support plan.
 - (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
 - (c) Command, control, and communications plan.
 - (d) Training areas/facilities required.
 - (e) Targetry required.
 - (f) Safety plan.
 - (g) Observer/controller plan.

(4) Minimum uniform requirements for this range will include Kevlar helmet, hearing protection, eye protection, and protective vests as a part of each individual's fighting load components. MK19 operators will also wear protective gloves.

(5) MK19 special instructions:

(a) All personnel on the firing line and within the 20-meter radius of each weapon system will wear approved protective helmets, gloves, protective body armor, single hearing protection, and proper eye protection.

(b) Daily noise exposure limit within the contour hazard area (20 meter radius) is 1000 rounds per day.

(c) Targets will be engaged only at ranges greater than 80 meters.

(d) Firing through obstructions is prohibited.

(e) Using units will be required to recover fired/expended rounds, under the supervision of Range Control personnel, at the completion of the range event. All Army personnel recovering 40-MM M918 TP projectiles will follow the procedures outlined in TB 9-1310-251-10. The use of protective equipment listed in TB 9-1310-251-10 when recovering rounds is mandatory.

(6) MK19 vehicle restrictions:

(a) Vehicle mounts will contain a stop to ensure minimum elevation is above 30 mils when firing.

(b) Firing from vehicles with open tops/hatches is prohibited.

(c) Side doors must be closed when firing to the flank of the vehicle.

(d) Speed limit for firing from moving vehicles over roads/improved trails is not greater than 10 MPH/16 KPH.

(e) Speed limit for firing from moving vehicles over rough roads/cross country is not greater than 5 MPH/8 KPH.

(7) Overhead firing techniques will not be conducted on this range.

(8) Individual/weapon safety requirements:

(a) Each weapon will have a safety function check prior to issue.

(b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months.

(c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodded) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

g. Road guard requirements: One at Gate 58 (24th Street and Sicily Road) preventing entry onto the range. Road guards are required to maintain FM communication with the Range OIC. Road guard is required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Surface Danger Zone.

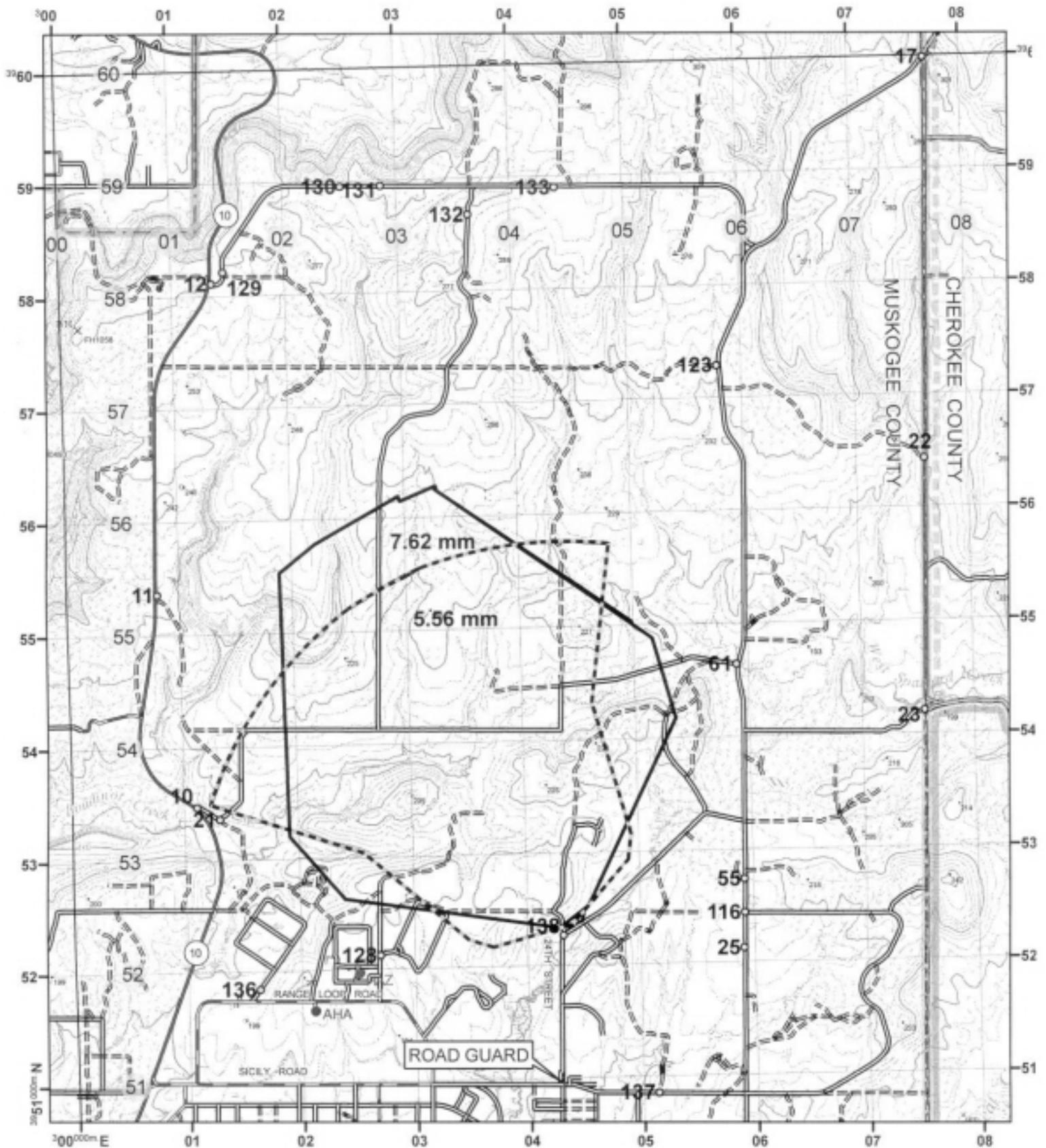
i. Range/s closed during firing: Breach Range, MK19, MRF-1, MRF-2, TOW Live Fire, Hand Grenade Familiarization, Zero-2, Sniper Field Fire, and UAC-Station 3 (Grenadier Trainer).

j. Barriers:

(1) Gates: 10, 11, 12, 17, 21, 22, 23, 25, 55, 60, 61.

(2) Cable Gates: 116, 123, 128, 129, 130, 131, 132, 133, 136, 137, and 138.

REACT TO CONVOY AMBUSH SDZ



0 375 750 1,500 2,250 3,000 Meters



R3400

R3400. Safety precautions

Infantry Squad Battle Course – Deliberate Attack on Fortified Position (Trench line)

a. References

- (1) FM 3-22.9.
- (2) FM 3-22.31.
- (3) FM 3-22.68.
- (4) FM 3-23.5.
- (5) FM 3-23.30.
- (6) FM 3-23.35.
- (7) FM 5-250.
- (8) AR 385-63.
- (9) DA Pam 385-63.

b. Location: UV0545958402.

c. Description and Capacity: An Infantry Squad Battle Course used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage and defeat stationary and moving infantry and stationary armor targets in a tactical array. Weapons/ammunition authorized on this range are: M4/5.56mm, M249/5.56mm, M240/7.62mm, M9/9mm, Fragmentation Hand Grenades, Bangalore torpedo, M203/40mm TP only, AT4/9mm sub caliber only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from the range (entrance) and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.

(4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above. Company level exercises require an Officer/Warrant Officer as the OIC and an E7 as the Safety Officer.

f. Special Instructions:

(1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.

(2) The Range Safety Officer is responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issuance of the range.

(3) Each using unit's command will develop a detailed, written training plan, which will be submitted, to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:

- (a) Maneuver and fire support plan.
- (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
- (c) Command, control, and communications plan.
- (d) Training areas/facilities required.
- (e) Targetry required.
- (f) Safety plan.
- (g) Observer/controller plan.

(4) Minimum uniform requirements for this range will include Kevlar helmet, hearing protection, eye protection, and protective vests as a part of each individual's fighting load components. Personnel who are within the 150 meter danger area (hand grenade) are also required to maintain this uniform.

(5) Overhead firing techniques will not be conducted on this range.

(6) Individual/weapon safety requirements:

(a) Each weapon will have a safety function check prior to issue of live ammunition on the range.

(b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months. Soldiers using fragmentation grenades or Bangalore torpedoes are required to have conducted a familiarization (live) event within the previous 12 months.

(c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodged) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

g. Road guard requirements:

(1) One at Hilltop Road entrance/Gate 12 preventing entry from the west.

(2) One at Wild horse Prairie Road UV0605258709 preventing entry from the northeast.

Road guards are required to maintain FM communication with the Range OIC. Road guards are required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Surface Danger Zone.

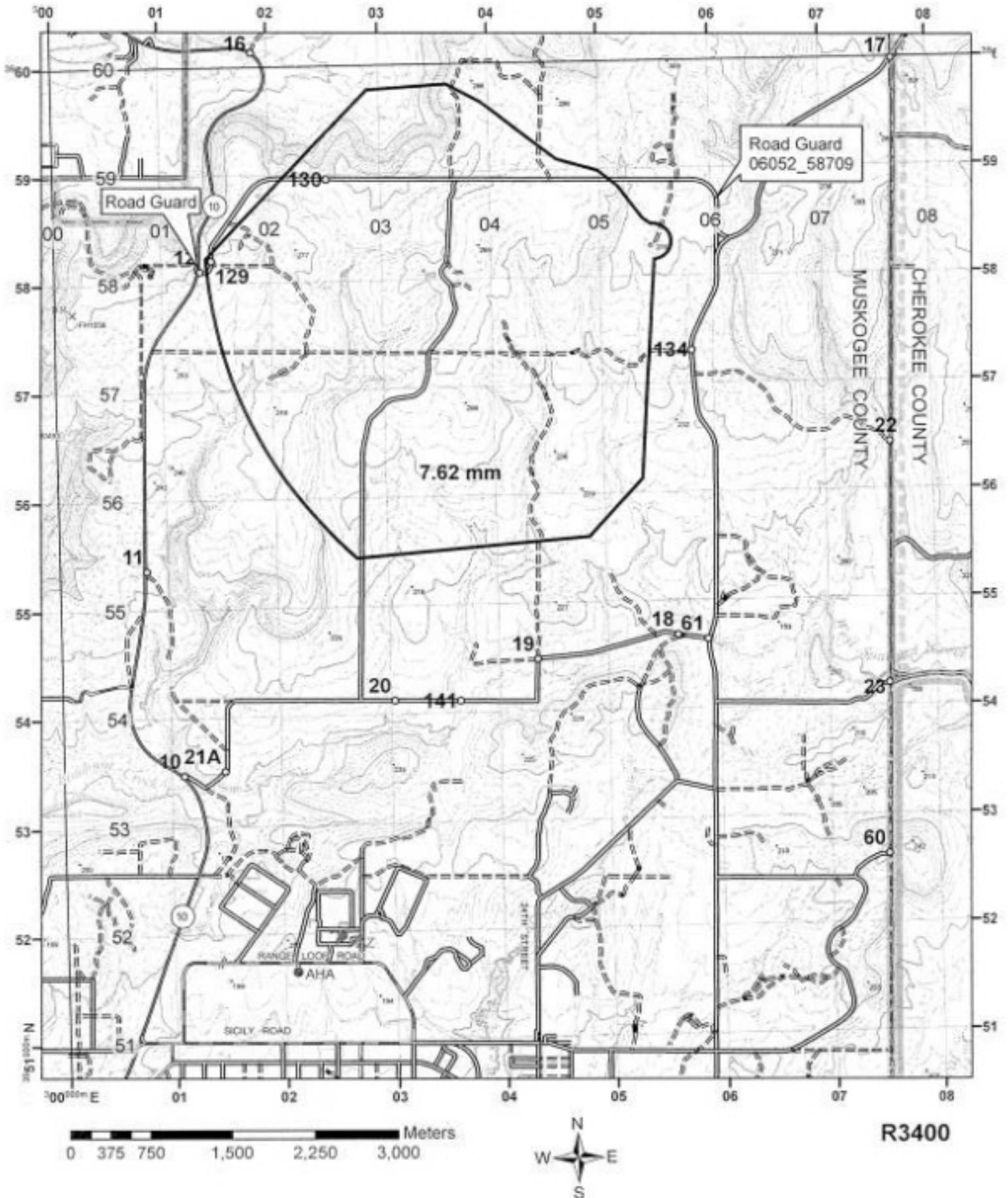
i. Range/s closed during firing: Squad Assault, Ambush, Machine Gun, Sniper Field Fire, and Fire and Maneuver (Buddy/Team) ranges.

j. Barriers:

(1) Gates: 10, 11, 12, 16, 17, 18, 19, 20, 21A, 22, 23, 60 and 61.

(2) Cable Gates: 120, 129, 130, 134, and 141.

TRENCH LINE SDZ



R3500. Safety precautions

Infantry Squad Battle Course – Squad Assault on Enemy Bunker (Squad Assault)

a. References:

- (1) FM 3-22.9.
- (2) FM 3-22.31.
- (3) FM 3-22.68.
- (4) FM 3-23.5.
- (5) FM 3-23.30.
- (6) FM 3-23.35.
- (7) AR 385-63.
- (8) DA Pam 385-63.

b. Location: UV0190358513.

c. Description and Capacity: An Infantry Squad Battle Course used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage and defeat stationary and moving infantry and stationary armor targets in a tactical array. Weapons/ammunition authorized on this range are: M4/5.56mm, M249/5.56mm, M240/7.62mm, M9/9mm, Fragmentation Hand Grenades, M203/40mm TP only, AT4/9mm sub caliber only.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from the range (entrance) and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.

(4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.

(2) The Range Safety Officer is responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issuance of the range.

(3) Each using unit's command will develop a detailed, written training plan, which will be submitted, to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:

- (a) Maneuver and fire support plan.
- (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
- (c) Command, control, and communications plan.
- (d) Training areas/facilities required.
- (e) Targetry required.
- (f) Safety plan.

(g) Observer/controller plan.

(4) Minimum uniform requirements for this range will include Kevlar helmet, hearing protection, eye protection, and protective vests as a part of each individual's fighting load components. Personnel who are within the 150 meter danger area (hand grenade) are also required to maintain this uniform.

(5) Overhead firing techniques will not be conducted on this range.

(6) Individual/weapon safety requirements:

(a) Each weapon will have a safety function check prior to issue of live ammunition on the range.

(b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months. Soldiers using fragmentation grenades are required to have conducted a qualification and familiarization (live) event within the previous 12 months.

(c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodded) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

g. Road guard requirement: One at Cable Gate 129 preventing entry into the range. Road guard is required to maintain FM communication with the Range OIC. Road guard is required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery

h. Impact Area closed during operation: See Range Surface Danger Zone.

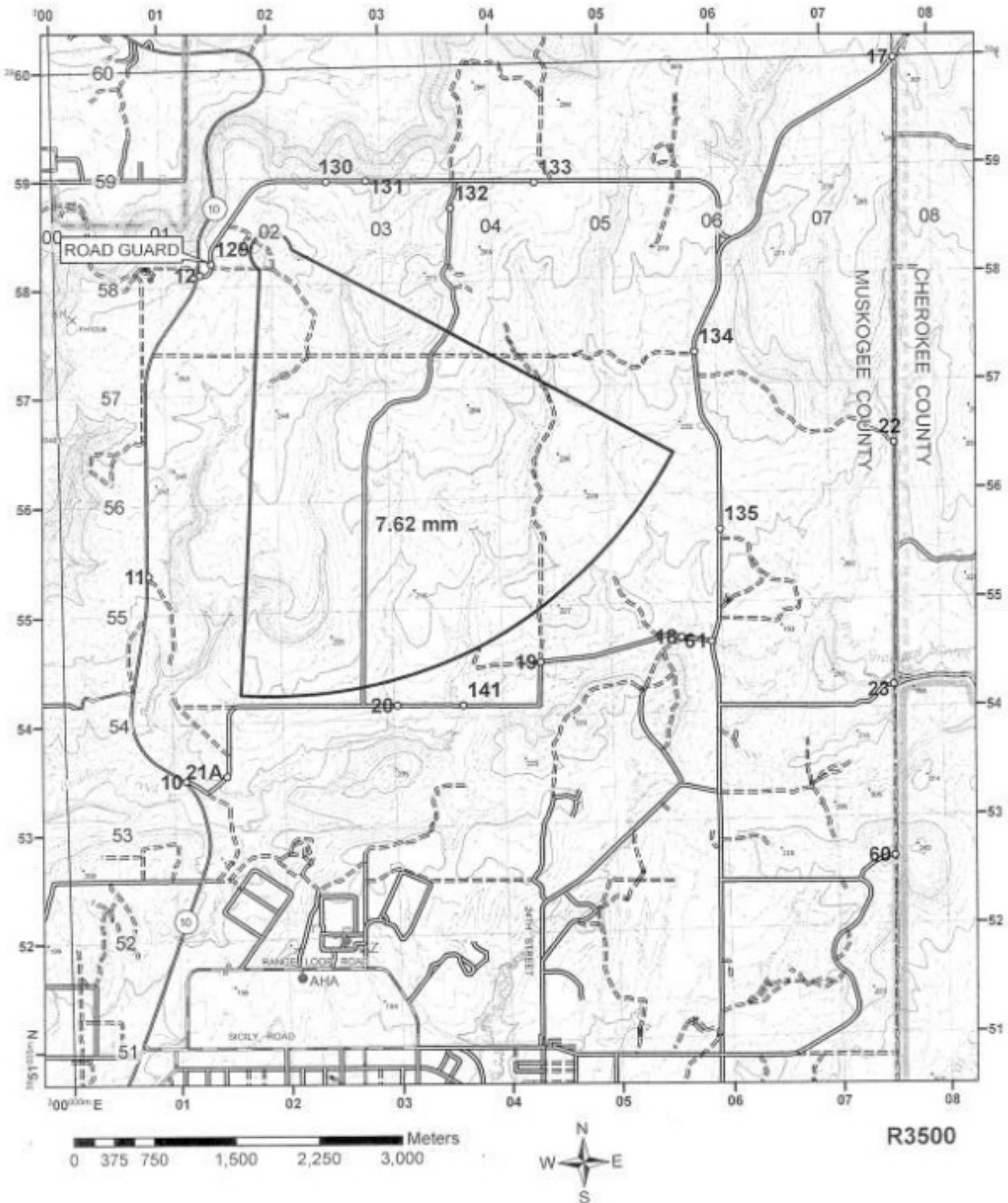
i. Ranges closed during operation: Fire and Maneuver (Buddy/Team) range.

j. Barriers:

(1) Gates: 10, 11, 12, 17, 18, 19, 20, 21A, 22, 23, 60, and 61.

(2) Cable Gates: 129, 130, 131, 132, 133, 134, 135, and 141.

SQUAD ASSAULT RANGE SDZ



R3600. Safety precautions

Fire and Maneuver Range (Buddy Team)

a. References:

- (1) FM 3-22.9.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0355757317.

c. Description and Capacity: This range is used to train individual soldiers and buddy-teams on basic fire and movement techniques against stationary infantry targets. Weapons/ammunition authorized on this range are: M16 series/5.56mm and M4/5.56mm. Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from the range (entrance) and the main Range Loop Road flagpole.
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.

- (4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

- (1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.

- (2) The Range Safety Officer is responsible to certify that all Observer Controllers/OC are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature block, prior to issuance of the range.

- (3) Each using unit's command will develop a detailed, written training plan, which will be submitted, to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario, which addresses the following areas:

- (a) Maneuver and fire support plan.
- (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
- (c) Command, control, and communications plan.
- (d) Training areas/facilities required.
- (e) Targetry required.
- (f) Safety plan.
- (g) Observer/controller plan.

- (4) Minimum uniform requirements for this range will include Kevlar helmet, hearing protection and eye protection as a component part of each individual's fighting load.

- (5) Overhead firing techniques will not be conducted on this range.

- (a) Each weapon will have a safety function check prior to issue of live ammunition on the range.
- (b) Each soldier (firing an individual weapon) will have qualified on his weapon system within the previous 12 months.

- (c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodded) off the firing line prior to movement away from the firing range (i.e. firing positions at the conclusion of the event).

g. Road guard requirement: One at Cable Gate 132. Road guard is required to maintain FM communication with the Range OIC. Road guard is required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

h. Impact Area closed during operation: See Range Surface Danger Zone.

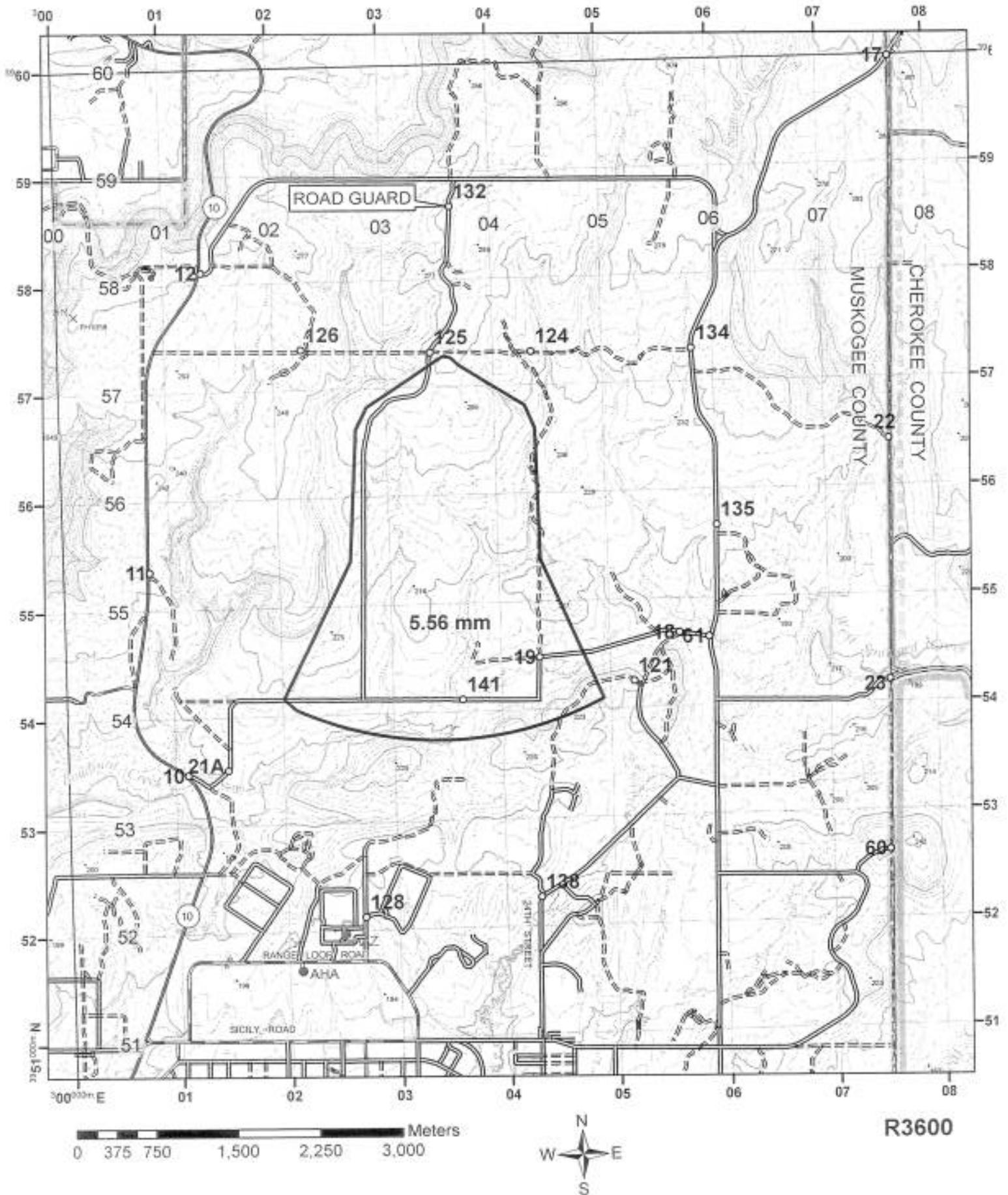
i. Ranges closed during operation: Squad Assault, Deliberate Attack, Sniper Field Fire, Machine Gun, and Ambush on Vehicular Convoy range.

j. Barriers:

(1) Gates: 10, 11, 12, 17, 18, 19, 21A, 22, 23, 60, and 61.

(2) Cable Gates: 121, 124, 125, 126, 128, 132, 134, 135, 138, and 141.

BUDDY TEAM RANGE SDZ



R4300. Safety precautions

Urban Assault Course Station 3 – Grenadier Gunnery (Grenadier Wall)

a. References:

- (1) FM 3-22.9.
- (2) FM 3-22.31.
- (3) AR 385-63.
- (4) DA Pam 385-63.

b. Location: UV0541450984.

c. Description and Capacity: This range is a component of the Urban Assault Course and is used to train M203 gunners on engagement of targets in an Urban Area. Range consists of an engagement area (30M X 150M) leading up to a 2 story building façade. Various targets (rifle and M203) are located in both the engagement area and the building façade (windows). Weapons/ammunition authorized for use on this range are M16A2, M4/5.56mm, M9/9mm, and M203/40mm target practice (TP). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
- (3) Range flags will be flown from the TOW MILES Range flagpole and the main Range Loop Road flagpole.
- (4) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

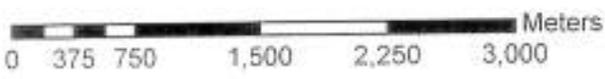
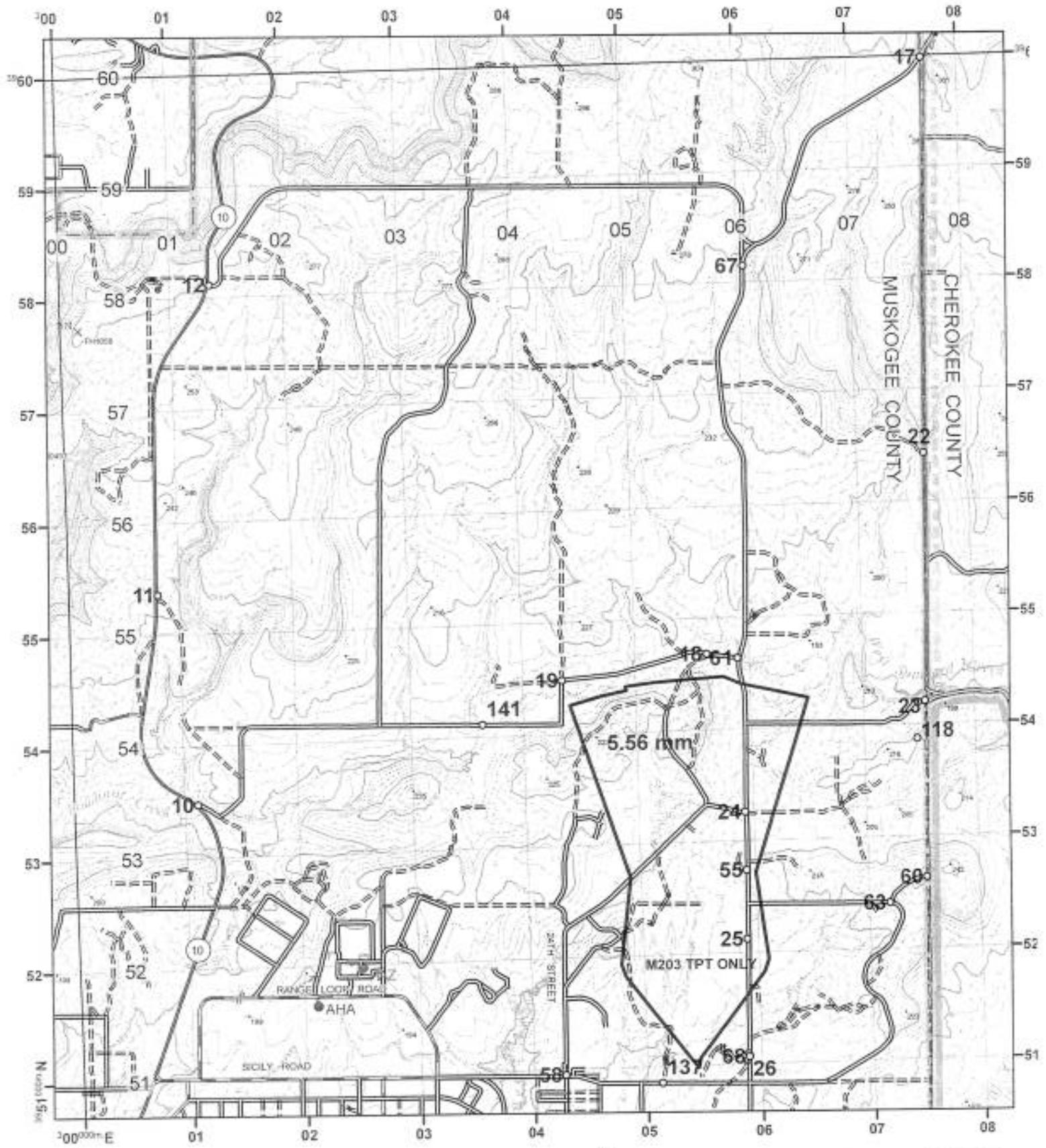
f. Special Instructions:

- (1) Range Officer and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment (IAW FM 100-14) prior to issue of the range.
- (2) Live fire Observer/Controllers (O/Cs) are required to accompany each team during the entire mission scenario to assist in the enforcement of range safety. The using organization will provide a minimum of one O/C per team (iteration).
- (3) The Range Safety Officer designated by the Commander will be responsible in certifying all observer/controllers on safety policies and procedures. A memorandum will be submitted to Range Control with the OC's name, rank, SSN and unit of assignment with the Range Safety Officer's signature prior to issuance of the range.
- (4) Minimum uniform requirements for this range will include Kevlar helmet and hearing protection as a component of each individual's fighting load.
- (5) Overhead firing techniques will not be conducted on this range.
- (6) Individual/weapon safety requirements:
 - (a) Each weapon will have a safety function check prior to issue of live ammunition on the range.
 - (b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months.
- (c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodged) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

- g. Impact Area closed during firing: See Range Surface Danger Zone.
- h. Range/s closed during firing: TOW MILES, MK19, Breach Range, TOW Live-fire, and Heavy Demolition ranges.
- i. Barriers:
 - (1) Gates; 10, 11, 12, 17, 18, 19, 22, 23, 24, 25, 26, 55, 58, 60, 61, 63, 67, and 68.
 - (2) Cable Gates; 118, 122, 137, and 141.

GRENADIER WALL RANGE SDZ



R4300

NON-LIVE FIRE RANGES

R1800. Safety precautions

Hand Grenade Qualification Course (Hand Grenade Qual)

a. References:

- (1) FM 3-23.30.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0177850723.

c. Description and Capacity: This range is used to train and test individual soldiers in the employment of hand grenades using the proper gripping procedures and throwing techniques. Weapon/ammunition authorized: M69 practice grenade/M228 fuse. Course consists of seven stations IAW FM 3-23.30.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Practice grenade fuses will not be used without the practice grenade bodies. Fuses will be secured in the grenade body prior to use.
- (3) Only mission essential personnel will be allowed in the SDZ during firing.
- (4) A medic must be present on the range during the conduct of operations. The aid man must have a standard aid bag and litter.
- (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

- (1) Using units may request hand grenade bodies from range control.
- (2) Grenade Identification station must be drawn from range control (not located on site).

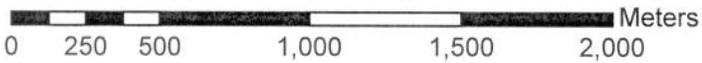
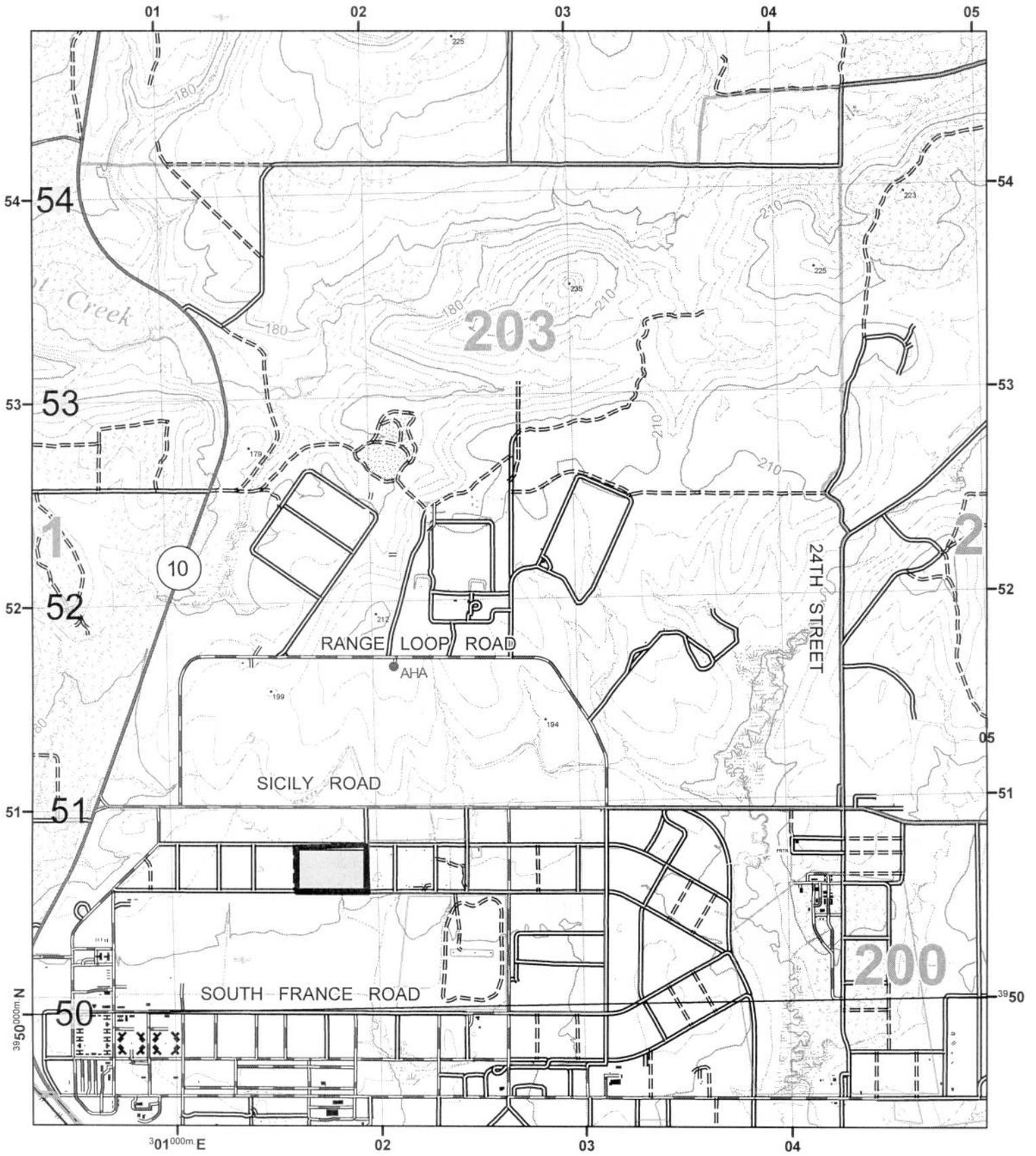
g. Road Guard Requirements: None.

h. Impact Area closed during firing: None.

i. Range/s closed during firing: None.

j. Barriers; None.

HAND GRENADE QUAL RANGE



R1800

R2000. Safety precautions

NBC Chamber

a. References:

- (1) FM 3-11.
- (2) FM 3-11.4.
- (3) AR 385-63.
- (4) DA Pam 385-63.

b. Location: UV0248950733.

c. Description and Capacity: A single building (one room) for training personnel in the employment of protective equipment and the effects of chemical agents. The building is a 16 feet by 32 feet one room chamber area. Weapons/ammunition authorized for use: CS riot control agents (RCAs). **NO BURNING CANISTERS OR SYSTEMS WILL BE USED IN THIS FACILITY.**

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) The Range Officer and Range Safety Officer must be NBC qualified and have received specific and formal training in the characteristics, capabilities and training applications of riot control agents (RCAs).
- (3) Protective masks must be available for all soldiers participating in training.
- (4) Unprotected personnel will not be exposed to RCAs longer than 15 seconds.
- (5) RCAs will not be released when personnel located downwind will be affected, unless exposure to a controlled concentration is desired.
- (6) CS agents will not be released within 50 meters of spectators.
- (7) Range flags will be flown from the flagpole located at the site and the main Range Loop Road flagpole.
- (8) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above. OIC and RSO must be NBC qualified when conducting NBC or smoke training.

f. Special Instructions: Range OIC will ensure three 5lb operational fire extinguishers are on site prior to opening the range. These extinguishers may be issued from Range Control.

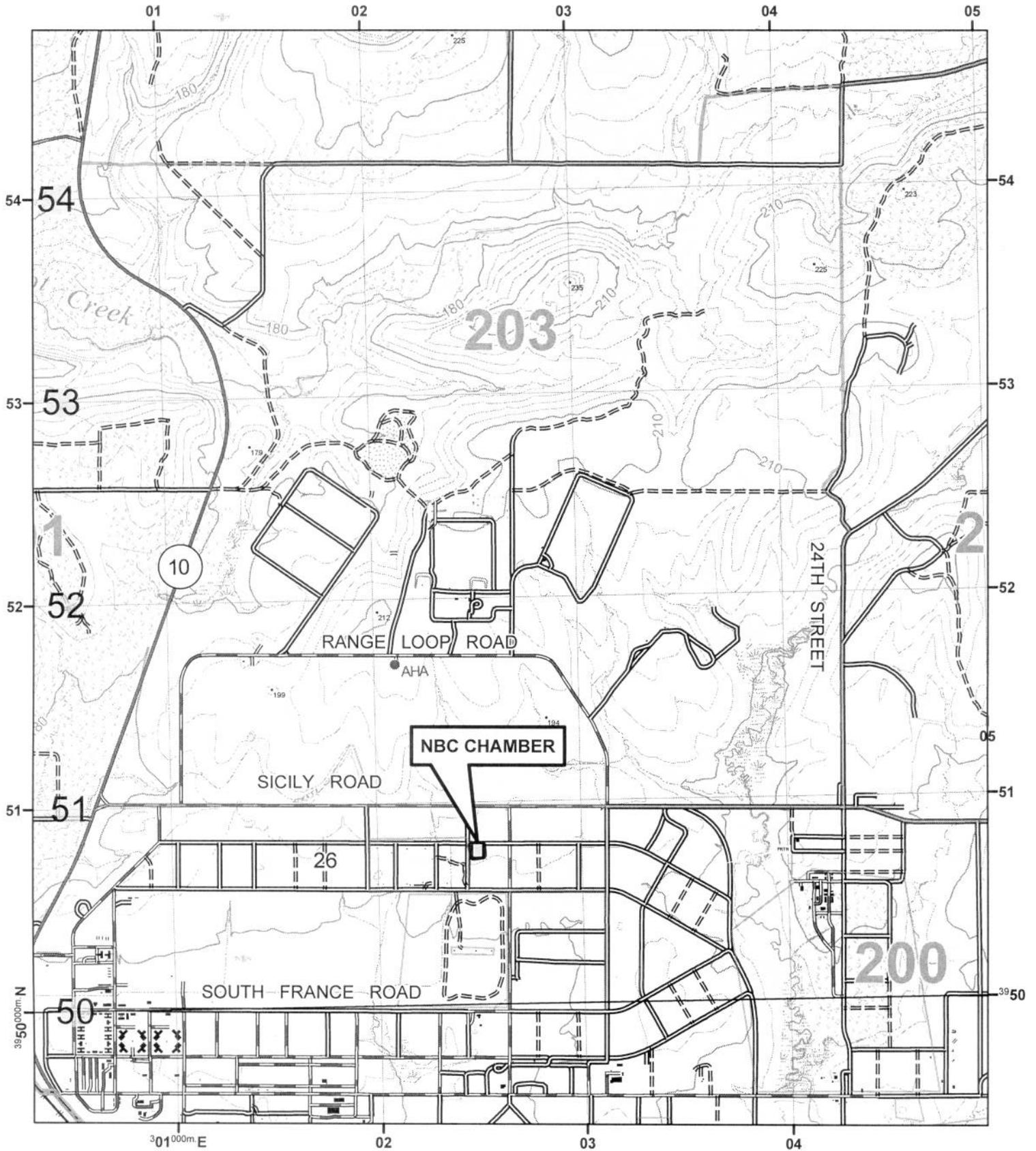
g. Road guard requirement: None.

h. Impact Area closed during operation: None.

i. Ranges closed during operation: Air Assault Obstacle Course, Rappelling Towers.

j. Barriers: None.

NBC CHAMBER RANGE FOOTPRINT



0 250 500 1,000 1,500 2,000 Meters



R2000

R3800. Safety precautions

Rappel Towers (Rappel Course)

a. References:

- (1) TC 21-24.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0234950250.

c. Description and Capacity: This course consists of a 15 ft. incline wall, a 32 ft. tower, and a 65 ft. ladder. The 32 and 65 ft. towers are set up to rappel from 3 sides (1 wall and 2 helicopter configurations). Each side contains 2 anchor points and one side is configured for fast rope. The 32 ft. tower is accessed by steps. The 65 ft. tower is accessed by ladders leading to landings every 10 feet. Each landing is rated at 600 lb capacity.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet.

(2) Range OIC will be responsible for preparing/turn in of risk assessment (FM 100-14) and rappel master certification (if required) when utilizing this facility. Assessment/certification must be turned in to range control prior to issuance of this facility.

(3) Rappel master personnel must be physically present on each side of the tower where rappelling is conducted (i.e. if only the wall side of both the 32 and 65 foot towers are being used - 1 rappel master will be present on each tower; if 3 sides of the 65 ft. tower are being used - 3 rappel masters will be present on the 65 ft. tower).

(4) A medical aid man/medic must be present on the facility during the conduct of live training. Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

(c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above

f. Special Instructions:

(1) Range OIC will ensure all personnel are familiar with the correct safety procedures as listed in TC 21-24.

(2) Range OIC will be responsible for ensuring required equipment and support personnel (IAW TC 21-24) are on site prior to conducting rappelling operations.

(3) Australian 'style' rappelling is prohibited on this facility.

g. Road Guard Requirements: None.

h. Impact Area closed during firing: None.

i. Range/s closed during firing: None.

j. Barriers: None.

R3900. Safety precautions

Air Assault Obstacle Course (Obstacle Course)

a. References:

- (1) FM 21-20.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0423050124.

c. Description and Capacity: This course consists of 9 obstacles from FM 21-20.

- (1) Tough One
- (2) Confidence Climb
- (3) Six Vault
- (4) High Step-over
- (5) Low-Belly Over
- (6) Belly Crawl
- (7) Swing-Stop-Jump
- (8) Incline Wall
- (9) Weaver

Bleachers are located in an administration area adjacent to station #9.

d. Communications: Using unit will establish 1 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to occupation. Using unit must provide communication source. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet.
(2) Range OIC will be responsible for preparing/turn in of risk assessment (FM 100-14) when utilizing this facility. Assessment must be turned in to range control prior to issue of training facility.

(3) A medical aid man/medic must be present on the facility during the conduct of live training. Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(4) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above

f. Special Instructions:

(1) Range OIC will ensure all personnel are familiar with the correct procedure for navigating each obstacle prior to conducting the event. This must be accomplished by a physical 'walk-through' on the obstacle.

(2) Range OIC will ensure Range Safety Officers are present on Obstacle 1 (Confidence Climb) and Obstacle 4 (Tough One) prior to conducting the event. Other safety officers may be located at more stations based on the OIC's risk assessment for the event.

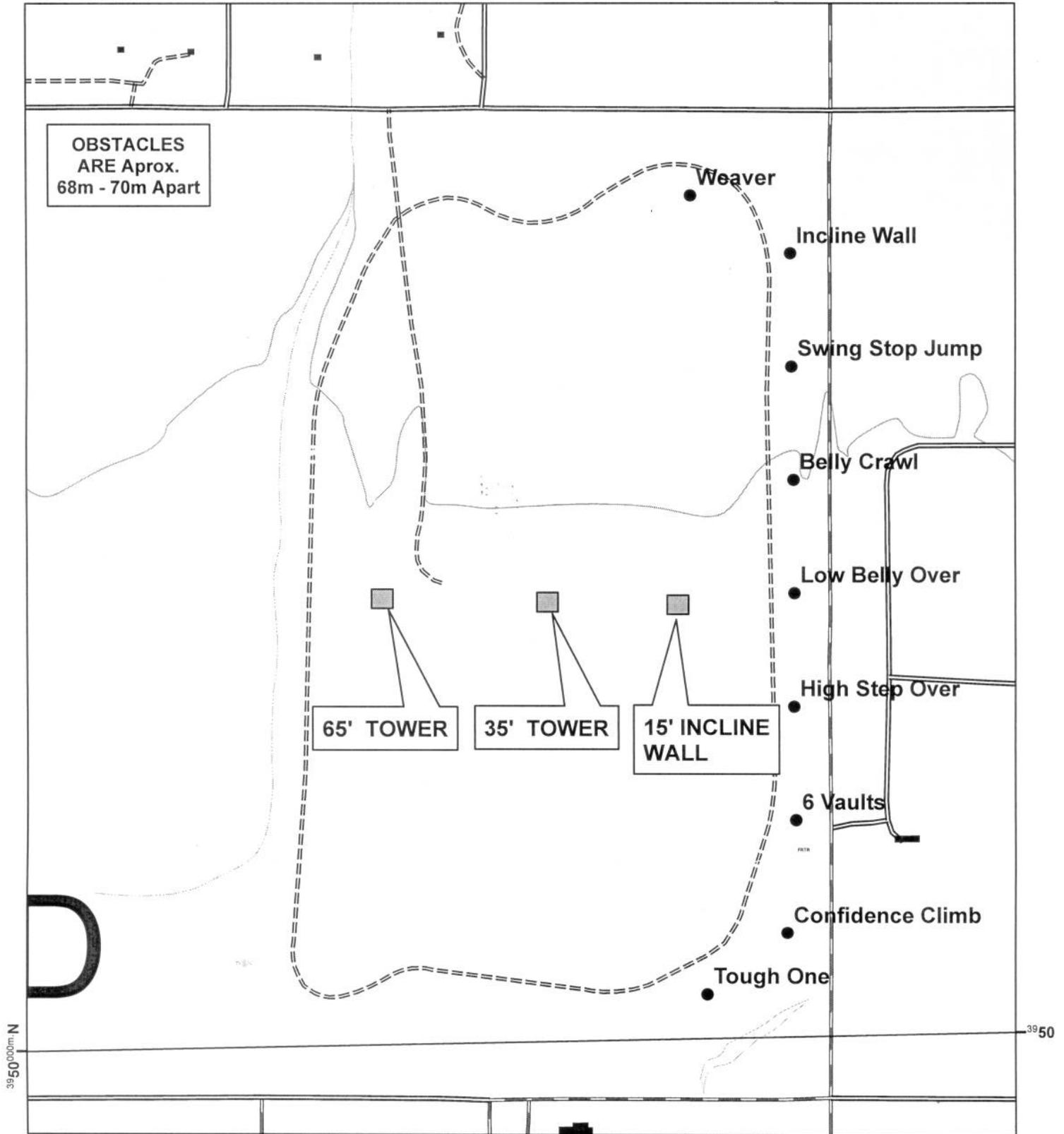
g. Road Guard Requirements: None.

h. Impact Area closed during firing: None.

i. Range/s closed during firing: NBC Chamber.

j. Barriers: None.

RAPPEL / OBSTACLE COURSE FOOTPRINTS



OBSTACLES
ARE Aprox.
68m - 70m Apart

65' TOWER

35' TOWER

15' INCLINE
WALL

Weaver

Incline Wall

Swing Stop Jump

Belly Crawl

Low Belly Over

High Step Over

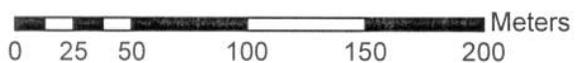
6 Vaults

Confidence Climb

Tough One

3950'00m. N

3950



R3800
R3900

R4100. Safety precautions

TA 200 Land Navigation Course (TA200 Land Nav)

a. References:

- (1) FM 3-25.26.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0422149903.

c. Description and Capacity: An area used for dismounted map reading, terrain association, or unit sustainment navigational training. Course consists of 14 start points, 8 waypoints, and 1 designated area for pace count.

d. Communications: Using unit will establish 1 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to occupation. Using unit must provide communication source. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet.

(2) Range OIC will be responsible for preparing/turn in of risk assessment (FM 100-14) when conducting night land navigational training. Assessment must be turned in to range control prior to issue of training area for night training.

(3) A medical aid man/medic must be present on the course during the conduct of operations. Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

(c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

The aid man must have a standard aid bag, litter, and litter-capable vehicle for transport.

(4) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

(1) Blank ammunition and pyrotechniques (other than emergency) are prohibited on this facility.

(2) Using units may require barricades for road entrances to this course. Unit will coordinate this requirement and be responsible for placement/recovery of barricades while utilizing the training area.

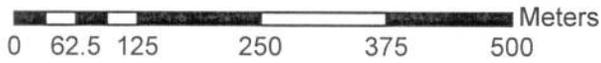
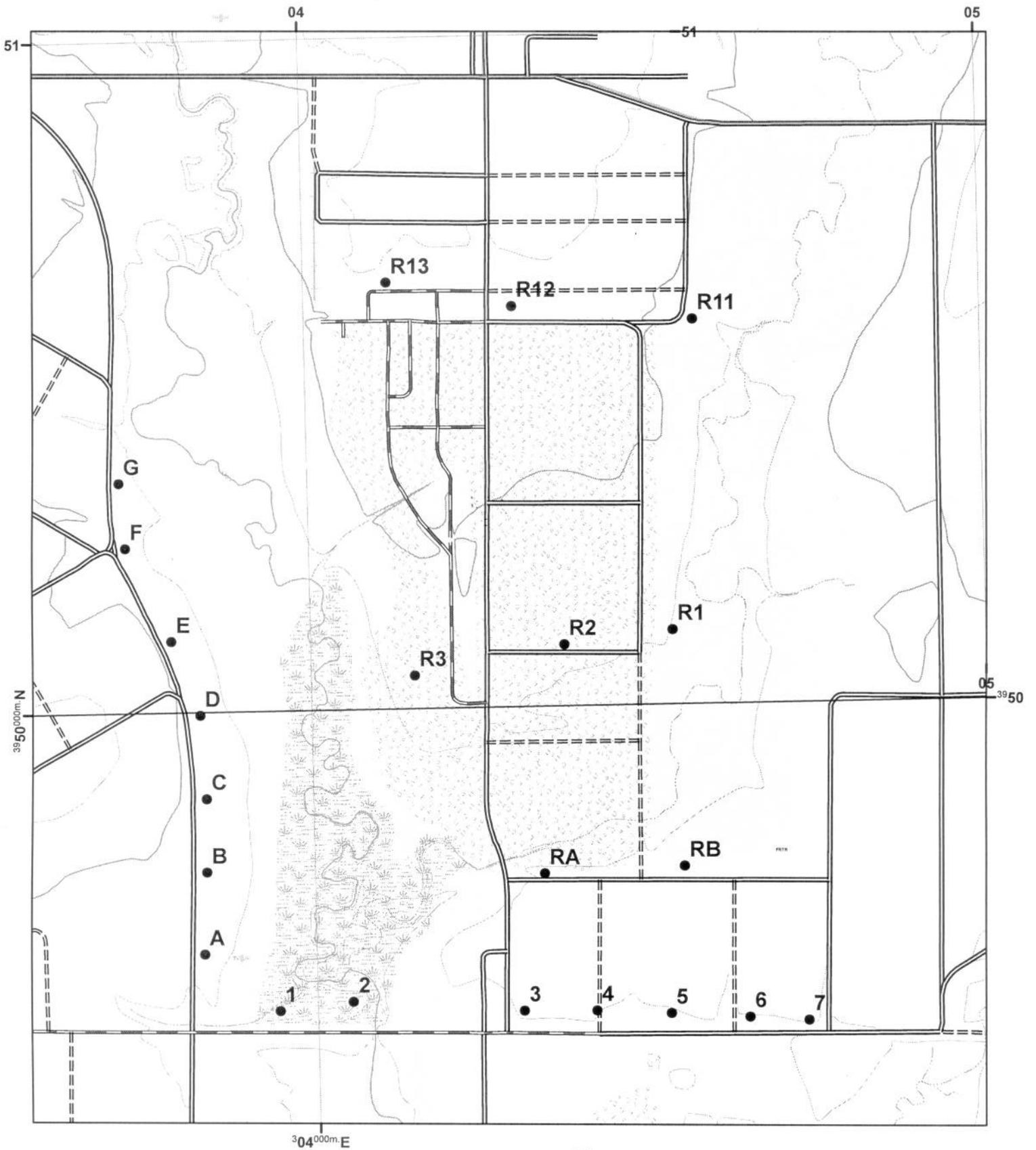
g. Road Guard Requirements: None.

h. Impact Area closed during firing: None.

i. Range/s closed during firing: MOUT CTF.

j. Barriers; None. Units may request/place road barricades to facilitate training objectives ONLY for the duration of the training event.

TA 200 LAND NAV COURSE



R4100

R4200. Safety precautions

MOUT Collective Training Facility (MOUT CTF)

a. References:

- (1) FM 3-06.
- (2) FM 3-06.11.
- (3) TC 90-1.
- (4) AR 385-63.
- (5) DA Pam 385-63.
- (6) DA Pam 385-64.

b. Location: UV0419250417.

c. Description and Capacity: This facility teaches the skills and unit cohesiveness necessary to conduct clearing, breaching, offensive and defensive operations in an urban setting. Weapons/ammunition authorized for use – organic weapons (no live fire)/blanks, MILES and simmunition (9mm). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range flags will be flown from flagpoles located at:
 - (a) Southwest corner of 24th Street and Sicily Road.
 - (b) UV0424250018, west access road off of 24th street (south of the CTF complex).
- (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
- (4) A medical aid man/medic must be present on the facility during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
- (5) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

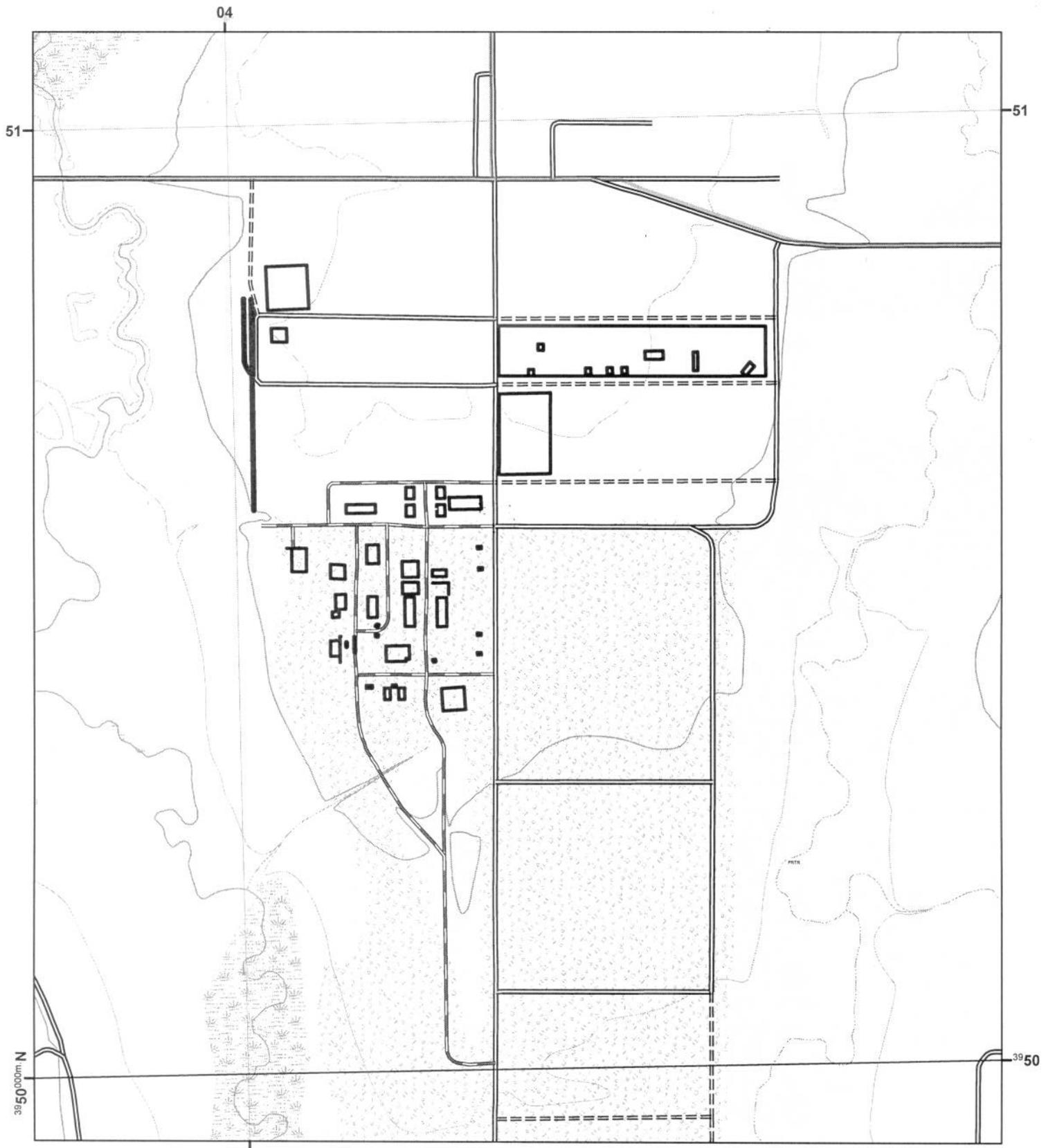
- (1) HC, CS or CN smoke is not authorized for use on the Collective Training Facility.
- (2) The use of pyrotechnic simulators, smoke grenades, or surface flares is prohibited within confined areas or against wooden buildings without approval from Range Control. The Range OIC must identify hazard protection and mitigation measures (IAW FM 100-14), and present them to Range Control for approval prior to any pyrotechniques being utilized within the structures/confined areas on the facility.
- (3) No blank ammunition (above 5.56mm), smoke, or pyrotechniques will be discharged in the underground sewer system. Special munitions (i.e. simmunition) must be approved by Range Control prior to use on the facility.
- (4) Rappel master personnel must be physically present on each side of the facility where rappelling is conducted.

(5) Climbing and descending the outside walls by use of grappling hooks, rappelling ropers, or free climbing is permitted under supervision of a designated Safety Officer. Climbing is prohibited on the following facilities:

- (a) Bus Stop.
- (b) Warehouse.
- (c) Train Station.
- (d) Thunderbird House.
- (e) Any trailer house or wooden/metal structure.
- (6) No soldiers are permitted on any metal/wooden roof.

- (7) Rooftop landings (helicopters) are prohibited on this facility. A designated landing pad is provided at the Southeast corner of the main complex.
- g. Road guard requirement: None.
 - h. Impact Area closed during operation: None.
 - i. Ranges closed during operation: TOW Live Fire, TA 200 Land Nav.
 - j. Barriers: The following gates may be closed to restrict outside access to the Urban Assault Course.
 - (1) Gates 56, 57, and 59.
 - (2) Cable Gate 112.

MOUT CTF FOOTPRINT



R4200

R4300. Safety precautions

Urban Assault Course (MOUT MAC)

a. References:

- (1) FM 3-06.
- (2) FM 3-06.11.
- (3) TC 90-1.
- (4) AR 385-63.
- (5) DA Pam 385-63.
- (6) DA Pam 385-64.

b. Location: UV0484549502.

c. Description and Capacity: This facility is used to train individual soldiers, squads and platoons on the tasks necessary to operate within a built-up/urban area. Facility consists of five stations IAW TC 90-10.

Weapons/ammunition authorized to fire: With the exception of Station 3, Grenadier Gunnery, the UAC is not intended for live-fire training. Station 3, Grenadier Gunnery Trainer, is designed to support 40mm Target Practice (TP) and 5.56mm ball ammunition. Station 3 is located approximately 1200 meters from the other stations (within approved range fans). Specific safety precautions for Station 3 are listed separately (A-16a). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range.

d. Communications:

(1) For non-live fire training: Using unit will establish communications with Range Control (FM 40.80 primary and 31.30 alternate) prior to occupation of the range. Units are required to initiate communication checks every four (4) hours after receiving a "hot range" time from Range Control. Units are required to have one primary and one secondary FM radio set for range communication while training.

(2) For live fire training: See paragraph A-16 (a) below. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet. Note, a separate packet is issued to units utilizing Station 3 as a live-fire event.

(2) NO 40mm HE AMMUNITION IS AUTHORIZED FOR USE ON STATION #3 – ONLY TARGET PRACTICE (TP).

(3) Range flags will be flown from;

(a) Non-live fire training: UAC Range flagpole (South end of UAC near mess shelter) and the main Range Loop Road flagpole.

(b) Live-fire training: UAC Station #3 Range flagpole (entrance to the range) and the main Range Loop Road flagpole.

(4) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.

(5) A medical aid man/medic must be present on the range/facility during the conduct of live firing/training. Additional medical requirements are:

(a) The aid man must be MOS qualified.

(b) The aid man must have a standard aid bag and litter.

(c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.

(d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(6) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) Minimum personnel requirements:

(a) Range OIC, note additional Range OIC and Safety Officer are required when using Station 3. Additional OIC and Safety Officer will be on site at the Grenadier Trainer Range during operations on the site.

(b) Station OIC/NCOIC (one for each training event/station when conducting live-fire station training). Station #3 is covered in paragraphs (a) and (b) above.

(c) Certified rappel master/s (when rappelling events are conducted).

(2) HC, CS or CN smoke is not authorized for use on the Urban Assault Course.

(3) The only structure authorized for rooftop movement is the Offense/Defense Building (Station 4). Movement on all other structure rooftops is prohibited. Movement on Station 4 is permitted under the supervision of OIC/NCOICs. No more than five soldiers are permitted on the roof at any one time.

(4) Climbing and descending the outside walls by use of grappling hooks, rappelling ropers, or free climbing is permitted on the Offense/Defense Building only. Anchor points (located at the structure) will be used.

(5) The use of pyrotechnic simulators, smoke grenades, or surface flares is prohibited within confined areas or against wooden buildings without approval from Range Control. The Range OIC must identify hazard protection and mitigation measures (IAW FM 100-14), and present them to Range Control for approval prior to any pyrotechniques being utilized within the structures/confined areas on the facility.

g. Road guard requirement: None.

h. Impact Area closed during operation: None.

i. Ranges closed during operation: None.

j. Barriers: The following gates may be closed to restrict outside access to the Urban Assault Course.

(1) Gates 32, 33.

(2) Cable Gate 145.

MOUT MAC / UAC FOOTPRINT



0 25 50 100 150 200 Meters



R4300

R4500. Safety precautions

EIB Land Navigation Course (EIB Land Nav)

a. References:

- (1) FM 3-25.26.
- (2) AR 385-63.
- (3) DA Pam 385-63.

b. Location: UV0423050124.

c. Description and Capacity: An area used for dismounted map reading, terrain association, or unit sustainment navigational training. Course consists of 12 start points and 32 waypoints.

d. Communications: Using unit will establish 1 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to occupation. Using unit must provide communication source. Operations will not be initiated or will immediately cease when communications with Range Control is broken.

e. Safety precautions:

- (1) Camp Gruber Range Safety briefing and Range Packet.
- (2) Range OIC will be responsible for preparing/turn in of risk assessment (FM 100-14) when conducting night land navigational training. Assessment must be turned in to range control prior to issue of training area for night training.
- (3) A medical aid man/medic must be present on the course during the conduct of operations. Additional medical requirements are:
 - (a) The aid man must be MOS qualified.
 - (b) The aid man must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

The aid man must have a standard aid bag , litter, and litter-capable vehicle for transport.

- (4) OIC must be a minimum of E6 or above. Safety Officer must be minimum of E5 or above.

f. Special Instructions:

(1) Due to this range's proximity to Greenleaf Lake, Range OIC will include the range safety brief – individual safety precautionary measures taken in and around water hazards for both daylight and limited visibility environments.

(2) Using units may require barricades for road/trail entrances to this course. Unit will coordinate this requirement and be responsible for placement/recovery of barricades while utilizing the training area.

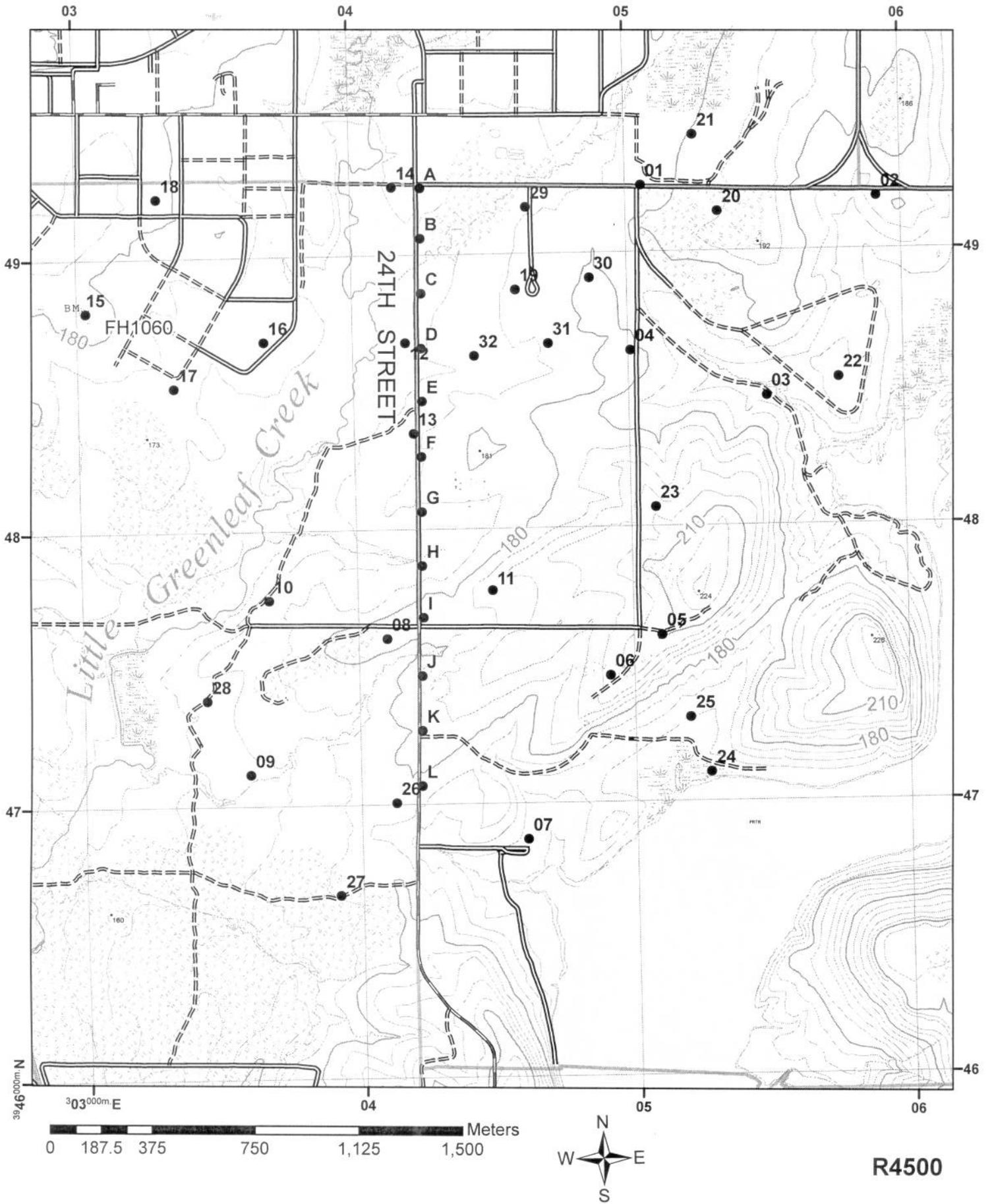
g. Road Guard Requirements: None.

h. Impact Area closed during firing: None.

i. Range/s closed during firing: None.

j. Barriers; None. Units may request/place road barricades to facilitate training objectives ONLY for the duration of the training event.

EIB LAND NAV COURSE



R4500

RTOWR. Safety precautions

TOW MILES Range (TOW MILES)

a. References:

- (1) FM 3-22.34.
- (2) AR 385-63.
- (3) DA Pam 385-63.
- (4) DA Pam 385-64.

b. Location: UV0552449657.

c. Description and Capacity: This range is used to train and test soldier on the skills necessary to employ weapons, identify, track, engage and defeat stationary and moving armor targets presented individually or as part of a tactical array. Range consists of five (5) battle positions (2 firing points per position) and various targets arrayed at 1000M to 3750M. Weapons/ammunition authorized to fire: TOW/MILES or TTFT.

d. Communications: Using unit will establish 2 means of communications with Range Control (FM Freq: 40.80 primary, and 31.30 alternate) prior to firing. Using unit must provide 2 communication sources; no additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety precautions:

(1) Camp Gruber Range Safety briefing and Range Packet.

(2) Personnel will not enter the range fan without contacting Range Control. Several live-fire ranges overlay this range fan. Other ranges impact within the TOW-MILESs engagement areas. The Range OIC must get approval from Range Control prior to moving downrange (i.e. for targetry set-up/repair/recovery).

(3) NO HE OR TP AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE – ONLY MILES OR TTFT SYSTEMS.

(4) Range flags will be flown from the TOW MILES Range flagpole (entrance) and the main Range Loop Road flagpole.

(5) A medical aid man/medic must be present on the range during the conduct of live firing/training.

Additional medical requirements are:

- (a) The aid man must be MOS qualified.
- (b) The aid man must have a standard aid bag and litter.
- (c) Unit commanders or representatives must be prepared to give the rank, name, and SSN of all medical qualified personnel.
- (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

(6) OIC must be a minimum of E7 or above. Safety Officer must be minimum of E6 or above.

f. Special Instructions:

(1) Units using anti-tank weapons effects signature simulators (ATWESS)

- (a) Ensure all personnel remain clear of the 40-meter (area F) danger area for each system.
- (b) Ensure all personnel within 50 meters of the weapon system utilize single hearing protection.
- (c) Ensure each ATWESS device is only armed when ready to fire.

(2) Specified safety procedures (FM 3-22.34) will be included into the orientation/safety briefing. This brief will include as a minimum:

- (a) The prescribed safety procedures listed in Appendixes E and F of FM 3-22.34.
- (b) The specified safety precautions for the type of training device utilized on the range.
- (c) A general orientation of the range and associated laser hazards (if laser-emitting devices are utilized).

Training devices (laser emitting) will be considered/treated as live weapons during the conduct of the range.

(d) Detailed orientation identifying safety procedures for day/night/limited visibility movements (mounted/dismounted) between battle positions. This will include procedures to ensure vehicles/personnel take specified precautions when crossing/entering/exiting range roads. If the Range OIC determines that additional risk mitigation measures are needed on the range (i.e. flashing barricades), he can request for these assets from Range Control.

- (3) Additional range equipment (i.e. barricades, signs) will be issued to the Range OIC.
- g. Road guard requirement: None. Using unit may establish road guards along adjacent roads to limit through traffic when range is operational (movement between Battle Positions). Approval must be obtained from Range Control prior to establishing these road guards.
 - h. Impact Area closed during operation: See Range Safety Fan.
 - i. Ranges closed during operation: TOW Live Fire, Breach Range, and Hand Grenade Familiarization.
 - j. Barriers:
 - (1) Gates; 18, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates; 116, 140, and 141.

TADSS Available at Camp Gruber

T-1. Virtual Convoy Operations Trainer (VCOT)

a. The VCOT provides training for combat convoys under realistic conditions through the streets of Baghdad and other areas. The VCOT trains soldiers to anticipate ambushes and other insurgent actions from all possible directions by allowing the crew to observe, maneuver, and fire their weapons through a full 360 degree environment.

b. Location: UV00614972

c. Description and Capacity: The VCOT is comprised of 4 Crew Stations networked with an Instructor Operator Station/ After Action Review Station. Two types of virtual crew stations are utilized.

- (1) Two reconfigurable wheeled crew station with gunner; driver; and commander.
- (2) Two multipurpose tabletop crew stations with driver and gunner stations.

d. Special Instructions

- (1) Trained Operators are the only personnel allowed to sign for and run the VCOT.
- (2) All daily usage must be turned into Range Control at the end of the training day

T-2. Engagement Skills Trainer (EST)

a. The Engagement Skills Trainer (EST) 2000 provides initial and sustainment marksmanship training, static unit collective gunnery and tactical training, and shoot/don't shoot training. It supports the following three modes of training: marksmanship, squad/fire team collective and judgmental use of force. The EST simulates 9 different small arms weapon systems. All EST 2000 training scenarios are U.S. Army Training and Doctrine Command (TRADOC) validated.

b. Location: UV00614972

c. Description and Capacity: The EST has 25 firing positions with different weapon configurations including the M4; M16; M203; M9; M1200; M249; M240; M2; MK19 and the M136 (AT4).

d. Special Instructions

- (1) Trained Operators are the only personnel allowed to sign for and run the EST.
- (2) All daily usage must be turned into Range Control at the end of the training day.

T-3. HMMWV Egress Assistance Trainer (HEAT)

a. The HEAT provides soldiers with the training needed to survive a partial or complete HMMWV rollover.

b. Location: UV00614972

c. Description and Capacity: The HEAT has 5 crew positions replicating a full size HMMWV. The HEAT is hydraulic motor controlled with adjustable speed and full 360 degree turnover capability.

d. Special Instructions

- (1) Trained Operators are the only personnel allowed to sign for and run the HEAT.
- (2) All daily usage must be turned into Range Control at the end of the training day

T-4. Laser Collective Combat Advanced Training System (LCCATS)

- a. LCCATS is a portable BEAMHIT training system with “E” and “F” type silhouettes available for use in different training scenarios including convoy; MOUT, and dismounted patrolling.
- b. Units may request the use of LCCATS through the Operations and Training Branch.

T-5. Laser Marksmanship Training System (LMTS)

- a. LMTS is a portable BEAMHIT scaled RETS Range for training marksmanship tasks in a controlled environment without the need for live fire.
- b. The system also includes the Machine Gun Training System which may be used with M240B, M249, and M2 machine guns (utilizing blanks) and barrel mounted lasers.
- c. Units may request the use of LMTS through the Operations and Training Branch.

T-6. Training Improvised Explosive Devices 2 (TIED II) Kit.

- a. Includes several different size devices (large, pressure-sensitive mine, and booby trap). It is a safe effective system that provides non-pyrotechnic signatures using CO2 and non toxic powder.
- b. Units may request the use of TIED II Kits through the Operations and Training Branch.

T-7. Sniper Training System (STS)

- a. STS is a portable BEAMHIT device used to train marksmanship skills for the M4/16-series rifles (Squad Designated Marksman), M24 sniper rifle, and the M107 Cal .50 sniper rifle, using system-generated or user-generated targets.
- b. Units may request the use of the STS through Operations and Training Branch.

**Appendix B
Situation Report**

B-1. Introduction

This appendix lists the information required by each unit/organization conducting training on Camp Gruber. This information will be provided at the daily Range Control coordination meeting.

B-2. Format

The required format is listed below in Table B-1.

**Table B-1
Situation Report Format**

1. UNIT: _____ Date/Time _____
2. PERSONNEL STRENGTH (ON POST): Total _____
3. TRAINING AREAS/RANGES/FACILITIES OCCUPIED (OVER NEXT 24 HRS): _____

4. TRAINING EVENTS/SUMMARY OF NEXT 24 HOURS: _____

5. ACCIDENTS/INJURIES: _____
6. NUMBER/TYPER OF VEHICLES ON RANGE/TRAINING AREAS:
/ _____ ; _____ / _____ ; _____ /
/ _____ ; _____ / _____ ; _____ /
/ _____ ; _____ / _____ ; _____ /
/ _____ ; _____ / _____ ; _____ /
7. RISK ASSESSMENTS (FOR REQUIRED TRAINING EVENTS): _____

Note: Additional reporting requirements may be required (based on unit training/range/facility use), and will be coordinated with Range Control personnel during unit/organization check in.

Appendix C Barriers

C-1. Introduction

Barriers are used on Camp Gruber to restrict access to specific areas during range/training operations. Current barriers used on the training center consist of pipe gates, cable gates, and barricades.

C-2. Responsibilities

Each unit will ensure required barriers (as listed in the CGR 385-1 and the specific Range/Facility Packet) are in place prior to requesting a 'hot' status from Range Control. Range control personnel will verify barrier emplacements prior to approving any unit for a 'hot' range/facility status.

C-3. Inoperative Barriers

Any inoperative barriers will be immediately reported to Range Control for repair/replacement.

C-4. Additional Barrier Requirements

Using units/organizations will coordinate with Range Control for issue of barricades (if required). Using units/organizations are responsible for placement and recovery of barricades and associated materials.

Appendix D Risk Management

D-1. Introduction

This appendix outlines unit responsibilities in identifying and addressing risk management into their operations on the training center. Risk management is utilized in all aspects of training in accordance with FM 100-14. Using units/organizations should incorporate risk management in all operations. Some specific operations (as identified in this regulation and the range packet) require units/organizations to provide a copy of their risk assessments prior to the conduct of training/range operations. Some events will require additional documentation along with risk assessments.

D-2. Responsibilities

a. Range Officer, Camp Gruber:

(1) Review all risk assessments provided by using units/organizations prior to approving range/facility use.

(2) Review unit/organization risk reduction implementation measures.

(3) Inform Chief, Operations and Plans of risk assessment/reduction measures that apply to (HIGH or EXTREMELY HIGH events).

b. Unit Commander/Range Officer in Charge (OIC)/ Observer Controller (OC)/Cadre:

(1) Identify and assesses operational hazards (IAW FM 100-14) and develop mitigation measures.

(2) Provides completed risk assessment to Range Control (as required).

(3) Supervises implementation of risk reduction (mitigation) measures.

(4) Coaches and mentors Unit/Range/Facility leadership in risk reduction identification and implementation of the risk reduction measures.

D-3. Conducting Risk Assessments

Specific guidance for conducting risk assessments is located in FM 100-14. There is additional specific information found in various FMs for specific weapon/ammunition systems (i.e. figure B-3, Appendix B, FM 3-23.30/Grenades and Pyrotechnic Signals depicts a risk assessment for live hand grenade operations). Risk assessments should always be conducted regardless whether copies of the assessments are provided to Range Control or not.

Appendix E
Range/Training Area/Demolition opening and closing checklists

E-1. Introduction

This appendix provides using units with the information required prior to opening/closing any range facility. These checklists must be completed by the OIC (Range Officer) or Commander (non-firing). The original document will be returned to Range Control prior to clearance to operate the range (hot status). A checklist is required for each day that the range/facility is operated. All facilities will require one type of opening and closing checklist:

- a. Range Opening/Closing checklist – required for all ranges when conducting live fire operations.
- b. Non-Live Fire Range Opening/Closing checklist – required when conducting operations other than live firing (training areas or facilities).
- c. Demolitions Range Opening/Closing checklist – required for all demolitions range operations.

Figure E-1
Range Opening/Closing Checklist

Unit Designation: _____ Date: _____

Range Designation/s: _____

Name & Rank of OIC: _____ Last Four: _____

Name & Rank of RSO: _____ Last Four: _____

Type of (A) Weapons _____ (B) Ammunitions _____
 (A) _____ (B) _____

Med. Requirement: **Medic:** Y/N **Driver:** Y/N **Vehicle:** Y/N **Aid Bag:** Y/N **Litter:** Y/N

Range Flag/Blinking Light (night only) up: Y/N

Special Instructions:

FM or TM for Type of Weapon being Fired Y/N (No answer, can not go Hot)

You must maintain continuous communication with Range Control A radio check must be made every hour, on the hour, while the range is open. Your next radio check is _____.

Signature of OIC: _____

Range Control Use Only

Range Opening time _____ Posted on RFMSS by (initials) _____

Closing

Is the Range flag/blinking light own? Y/N

Number of personnel on site: _____ Type of weapons fired: _____

Number of rounds fired: Include DODIC

Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____

Figure E-2
Non-Live Fire Range Opening/Closing Checklist

Unit Designation: _____ Date: _____

Range Designation/s: _____

Name & Rank of OIC: _____ Last Four: _____

Name & Rank of RSO: _____ Last Four: _____

Type of (A) Weapons _____ (B) Pyro _____
(A) _____ (B) _____

Med. Requirement: *Medic:* Y/N *Driver:* Y/N *Vehicle:* Y/N *Aid Bag:* Y/N *Litter:* Y/N

Range Flag/Blinking Light (night only) up: Y/N

Special Instructions:

You must maintain continuous communication with Range Control. A radio check must be made every 4 hours while the range is open. Your next radio check is _____.

Signature of OIC: _____

Range Control Use Only

Range Opening time _____ Posted on RFMSS by (initials) _____

Closing

Is the Range flag/blinking light own? Y/N

Number of personnel on site: _____ Type of weapons fired: _____

Number of rounds fired: Include DODIC

Rounds: _____ Type: _____ DODIC: _____

Figure E-3
Demo Range Opening/Closing Checklist

Unit Designation: _____ Date: _____

Range Designation/s: _____

Name & Rank of OIC: _____ Last Four: _____

Name & Rank of RSO: _____ Last Four: _____

Required Documents (prior to opening the range):

Demo plan/target folder (type/quantity of charge/blast): Y / N

Risk Management Worksheet (approved by appropriate Command): Y / N

Signature of OIC: _____

Med. Requirement: **Medic:** Y/N **Driver:** Y/N **Vehicle:** Y/N **Aid Bag:** Y/N **Litter:** Y/N

Range Flag/Blinking Light (night only) up: Y/N

All barriers closed and road guards are posted with communications to the Range OIC: Y / N

Special Instructions: (Updates required every 4 hours until range is closed)

Estimated cloud cover (cannot exceed 80%) // Date-time group: _____ // _____

Cloud ceiling (must be greater than 2000 ft) // Date-time group: _____ // _____

Any demolitions conducted at night require approval of Camp Gruber Range Control (range officer)

You must maintain continuous communication with Range Control. A radio check must be made every hour, on the hour, while the range is open. Your next radio check is _____.

Range Control Use Only

Range Opening time _____ Posted on RFMSS by (initials) _____

Closing

Is the Range flag/blinking light on? Y/N

Number of personnel on site: _____ Type of weapons fired: _____

Number of rounds/shots fired: Include DODIC

Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____
Rounds: _____	Type: _____	DODIC: _____

Appendix F
Commander's certification memorandum

F-1. Introduction

This appendix provides an example of the required certification memorandum. This document is required prior to issue of any range or training facility to unit/organizational personnel. ONLY certified OICs and Safety Officers will be issued ranges/facilities.

Figure F-1
Commander's Certification Memorandum

(Unit Designation/Letterhead)

Office symbol (MARKS Code)

Date

MEMORANDUM FOR Commander, Camp Gruber Joint Training Center – Heavy, Attn: Range Control, PO Box 29, Braggs, OK 74423-0029

SUBJECT: Certification of Officer in Charge(OIC)/Safety Officer(RSO)

1. The following personnel assigned or attached to this unit/organization are certified to perform the duties as OIC or RSO of ranges and training facilities at Camp Gruber.

<i>NAME</i>	<i>GRADE</i>	<i>SSN</i>	<i>OIC</i>	<i>RSO</i>
<i>Last, First, Middle Initial</i>	<i>Pay Grade</i>	<i>XXX-XX-XXXX</i>	<i>Yes-all ranges</i>	<i>Yes-all ranges</i>
<i>Last, First, Middle Initial</i>	<i>Pay Grade</i>	<i>XXX-XX-XXXX</i>	<i>Yes-small arms only</i>	<i>Yes-all ranges</i>

2. These individuals meet the qualification requirements of DA Pam 385-63 and CGR 385-1 pertaining to range and training facility operations.

3. Above personnel understand that they must receive the required range/training area safety briefings prior to issue of any facility/range.

///SIGNED///
Commander's Signature Block

SAMPLE

Appendix G

Range OIC/Safety/Medical requirements

G-1. Introduction

This appendix provides the Range OIC, Safety Officer, and medical support requirements by type of range/facility. Additional requirements (by Range or Facility) are listed in Appendix A and the Range Packet.

Table G-1
Minimum Officer in Charge (OIC), Safety Officer, and Medical Requirements

Weapon System/Facility/Area	Officer in Charge	Safety Officer	Medical Requirement
Small Arms/Machine Gun Ranges	E6	E5	Yes ¹
Practice Hand Grenade/Qualification, Sub-Caliber Training Devices, Laser Devices, Simulators and trip flares	E6	E5	Yes ¹
Chemical Agents and Smokes ^{2,6}	E6	E5	Yes ¹
Live Grenades, Grenade Launchers (TP), Grenade Machine Guns (TP), Demolitions ³	E7	E6	Yes ¹
Mortars (SRTR) ³	E6	E6	Yes ¹
Direct fire Anti-Tank rockets, Missiles (TP), and simulators (TOW Range)	E7	E6	Yes ¹
Live Fire Exercises using organic weapons, squad through Platoon.	E7	E6	Yes ¹
Live Fire Exercises using organic weapons, Company Level	Officer/Warrant Officer	E7	Yes ¹
Non-Firing Training Facilities			
Training Areas, Land Navigation Courses	E6	E5	Yes ¹
Other Facilities (MOUT, Obstacle Course ⁴)	E7	E6	Yes ¹

¹Several ranges/facilities have additional/specific medical support requirements. Refer to Appendix A for detailed requirements.

²OIC and RSO must be NBC qualified when conducting NBC or smoke training.

³RSO for USMC units can be E5 when conducting mortar training.

⁴Must have current Rappel Master Certification on file prior to issue of any rappelling tower.

⁵OIC and Safety Officer must have command certification prior to conducting demolition operations.

⁶RSO for USMC units will be E6 or above.

(Civilian Agencies can substitute certain work related job specialties and titles for OIC and RSO rank requirements, OIC and RSO requirements must still be approved through Range Control)

Collective Live Fire Checklist

Documents Required Prior To Issuing Range

UNIT:	EVENT/DATE:	GO/NO-GO
1) Personnel Weapons Qualification Roster (within 6 months of event).	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
2) OC/Cadre Qualification Roster.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
3) Detailed Scenario with sketches/overlays that define the scheme of maneuver and integration of supporting fires.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
4) Coordination lines or checkpoints to identify maneuver limits.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
5) Limits of fire for each element and/or weapon (SDZ).	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
6) Mortar/Artillery firing data, safety cards, shift information.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
7) Specific controls for firing while moving.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
8) Provisions for search, marking, and disposal of duds.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
9) Communication and control measures to include air observer if employed.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
10) Safety Checklist.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
11) Target System Support.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
12) Waiver Justifications (if required).	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
13) Timeline.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
14) Risk Assessments.	<input type="checkbox"/> GO <input type="checkbox"/> NO-GO	
Comments:		
15) OVERALL COMMENTS:		

Appendix I

