

Chapter 1

Introduction

1-1. Purpose. To provide information to trainers and schedulers from all branches of the Department of Defense and civilian agencies on Camp Grayling Ranges and Training Facilities.

1-2. References:

- a) AR 385-63, Range Safety
- b) DA Pam 385-63, Range Safety
- c) DA Pam 385-64, Ammunition and Explosives Safety Standards
- d) DA Pam 385-64, Ammunition and Explosives Safety Standards
- e) TC 25-8, Training Ranges
- f) CG Reg. 350-10, Policies and Procedures for Scheduling Facilities, Training Events and Ranges on Camp Grayling
- g) NGR 385-63, Army National Guard Range Safety Program, Policy, and Standards
- h) CG Reg. 385-63, Camp Grayling Range Safety Regulation

1-3 Policy. Provide valuable planning information of training resources available to units and agencies wishing to conduct training at Camp Grayling requiring the use of ranges and/or training facilities. This publication provides units detailed information of specific numbered and lettered training areas, ranges, firing positions, mortar positions, and training facilities available on request to Camp Grayling that may support commander's yearly training strategies.

1-4 Procedures. Refer to CG Reg 350-10, **Policies and Procedures for Scheduling Facilities, Training Events and Ranges on Camp Grayling**. Annual Training and IDT scheduling matrices are provided in CG Reg. 350-10. Range 13 and Range 40 complex users **MUST** provide a firing point matrix for scheduling mortars, howitzers, anti-armor and helicopter firing points.

Chapter 2**RANGES AND TRAINING FACILITIES****RANGES**

RANGE	NUMBER OF FIRING POINTS	GRID COORDINATES	PAGE #
PISTOL			
RANGE 1 (AUTOMATED CP/MPQC)	10/9 MPQC	740 440	7
RANGE 2 (25 METER)	20	737 441	8
RANGE 50 (25 METER)	13	919 711	58
SHOTGUN			
RANGE 6A	16	714 434	11
RIFLE			
RANGE 3A (25 METER /Alt C)	22	732 440	9
RANGE 3B (25 METER / Alt C)	42	732 440	9
RANGE 4 (BREACHING FACILITY)	12	728 437	10
RANGE 6B (25 METER / Alt C)	30	714 434	12
RANGE 9A (25 METER / Alt C)	20	728 437	14
RANGE 10 (1000 YARD KD Range)	50	693 436	15
RANGE 11 (300 METER QUAL)	10	693 440	16
RANGE 16 (25 METER / Alt C)	33	691 477	22
RANGE 18 Automated Record Fire (ARF)	9	690 474	25
RANGE 19 Automated Record Fire (ARF)	16	696 479	26
RANGE 50 (25 METER / Alt C)	13	919 711	58
MACHINE-GUN: (M60) (7.62mm), (M249) (5.56mm) & (M240G) (7.62mm)			
RANGE 3A (ZERO/FAM), (10 METER)	22	732 440	9
RANGE 8 (TRANSITION), (800 METER)	10	701 438	13
RANGE 9B (FAM/QUAL), (10 METER)	20	728 437	14
RANGE 10 (KD RANGE), (1000 YARD)	50	693 436	15
RANGE 45 (FAM), (400-1500 METER)	3	594 695	55
MACHINE-GUN (M2), (.50 Cal PLASTIC ONLY)			
RANGE 3A (10M ZERO/FAM)	10	732 440	9
RANGE 9B (FAM/QUAL), (10 METER)	20	728 437	14
RANGE 10 (FAMILIARIZATION)	50	693 436	15

RANGE	NUMBER OF FIRING POINTS	GRID COORDINATES	PAGE #
MACHINE-GUN (M2) (.50 Cal BALL)			
RANGE 31 (Zero/Transition mounted and dismounted)	4	877 538	38
RANGE 45	3	894 695	55
COMPETITIVE MARKSMANSHIP			
RANGE 1 (PISTOL)	10	740 440	7
RANGE 2 (PISTOL)	10	737 441	8
RANGE 8 (MACHINE-GUN/7.62mm)	10	701 438	13
RANGE 10 (1000YD KD HIGHPOWER)	50	693 436	15
INFANTRY BATTLE COURSE			
RANGE 12 (Fire and Movement Range)	SQUAD	682 4504	17
RANGE 43 (Fire and Movement Range)	SQD/PLT	945 664	54
RANGE 39 (IPBC)	SQD/PLT/CO	877 538	43
GRENADES			
RANGE 17 (FRAGMENTATION), (HE) 3 BAYS		736 398	23
RANGE 17A (QUAL CRS), (M69 ONLY) 7 STATIONS		741 703	24
RANGE 15 (M203, HE/TP)	16	723 407	21
MK 19			
RANGE 37 (MK 19, 40mm TP Only GRENADE LAUNCHERS)	2	865 515	41
RANGE 41 (HE/TP)	2	917 650	53
CONVOY COMMANDERS REACTION COURSE			
RANGE 38 (5.56mm, 7.62mm, .50cal, Short Range Slap rounds)		877 538	42
MORTARS			
RANGE 13 (60mm)	16	7375 3979	18
RANGE 14 (SABOT)	8	716 393	20
RANGE 40 (60, 81, & 120mm)	28	913 676	49
DEMOLITION'S AND MINES			
RANGE 13 (DEMO TRAINING)	N/A	7378 3976	18
RANGE 20 (DEMO TRAINING)	N/A	704 430	27
RANGE 21 (ENGR DEMO TNG)	N/A	694 419	28
RANGE 35(MPRC,INERT MICLIC ONLY)	N/A	877 538	39
RANGE 43 (DEMO TRAINING)	N/A	945 664	54

RANGE	NUMBER OF FIRING POINTS	GRID COORDINATES	PAGE #
ARMOR			
MULTI PURPOSE RANGE COMPLEX (TANK TABLES V THRU XII)	4 LANES 28 FPs	877 538	32
RANGE 36 (LASER/TANK GUN CALIBRATION, MLRS)	1	877-538	40
ANTI-ARMOR			
RANGE 15 (SUBCAL, AT 4, LAW)	5	723 407	21
RANGE 40 (TOW, FP C4)	2	9083 7065	50
RANGE 41 (DRAG, LAW, AT 4, MK-19)	2	917 650	53
MULTI PURPOSE RANGE COMPLEX (TOW, DRAGON)	2 LANES 28 FPs	877 538	36
ARTILLERY			
RANGE 40 (105mm, 155mm)	65	883 660	47
RANGE 14 (SUBCAL ONLY)	6	716 393	20
RANGE 36 (MLRS/HIMARS)	N/A	877 538	40
AERIAL GUNNERY			
MPRC		877 538	34
HELICOPTER DOOR GUNNERY			
RANGE 40 COMPLEX	N/A	935 660	52
MULTI PURPOSE RANGE COMPLEX		877 538	35
AIR-TO-GROUND			
AIR-TO-GROUND			59
RANGE 50 (25 METER / Alt C)	13	919 711	58

TRAINING FACILITIES

APFT TRACK: 1 mile oval track with a 12 foot wide running/walking path, marked at each quarter mile interval, (Location 765 432)

CIED LANES: 6 teaching stations at each location containing static displays of the 6 main categories (RCIED, CWIED, VBIED, VOIED, PBIED, EFP) of IED that are encountered in Iraq and Afghanistan. These are located at the South FOB, North FOB, and MPRC.

EPW COMPOUND: Consists of a 30,000 square feet, area surrounded by a double cyclone fence topped by barbed wire with seven (7) guard towers and is suitable for Enemy Prisoner-of-War training to include 250 Prisoner, ¼ scale compound, 16000 ft Breaching and Room Clearing facilities. **NO SIMUNITIONS** (Location 734 437)

GRAYLING ARMY AIRFIELD: Operations Center for military aircraft with an Air Traffic Control Tower, Crash-Rescue Section and refueling capabilities. Approach can be made using VOR, NDB; GPS on runway 14. GAAFs' runways are 5000 X 150 with lighting including PAPIS (Precision Approach Position Indicating System) and REILS (Runway End Indicator Lighting System). There is also, 1 - 80 X 80 Aircraft Storage Facility w/ 20' x 60' door, 49 cement pads w/tie downs (for OH-58 and UH-1 ONLY), 1 Mess Hall, 3 Administrative buildings and 3 (80 Pax) soldier billets. 1 Building with two (2) classrooms large enough to handle 50 personnel, each classroom was remodeled in 1997 with M/F latrines, stage for lectures or meetings. The GAAF is a certified Drop Zone. (Location 80 49)

LAND NAVIGATION COURSES:

- Military Road Course (Dismounted): 8 starting points, 50 points total, courses established for both Day/Night Land Navigation Training. (Location 774 433)
- Howe Road Course (Dismounted): 1 starting point, 15 points total, courses established for both Day/Night Navigation Training. (731 439)
- South Camp Course (Mounted): 6 starting points, 6 points total, also includes Dead Reckoning portion to the course. (758 441)

COMBAT PITS: Both Combat Pits have sand bags outlining the perimeter, with wood chips to absorb impact inside of the pit. Located in the middle of both combat pits is an area for the instructors to observe, enclosed with sand bags. They are located off of Howe Road in 600 Building area. (FQ 74531 43705)

MILLER DROP ZONE: Capable of handling troops and/or cargo drops, 200 acre area of operation, (Location 956 569) **Restriction**, can not use when MPRC is hot.

STEELGATE DROP ZONE: 215 acre area, Cargo Drops Only, (Location 916 719) **Restriction**, can not use when Air to Ground Range is Hot.

RAT DROP ZONE: 300 yard RADIUS, Halo Only, (Location 919 715) **Restriction**, can not use when Air to Ground Range is Hot.

NBC FACILITY: Building can accommodate 15 - 20 soldiers at a time, (Location 706 437)

RAPPELLING TOWER: Located at the Grayling Army Airfield on the Air Traffic Control Tower, (Location 806 498). Operators must have the Range Control Safety Brief.

PARADE FIELD: 24 Acre Area for Command functions, (Location 752 436)

RAILHEAD: The railhead is located at AASF #2 on the Grayling Army Airfield.

RASMUS RUN/FITNESS TRAIL: 1 mile fitness course located at the north end of Eight Street.

BRIDGE SITE: Area is capable for the construction of up to a Medium Girder Bridge, (Location 685 425)

Float Bridge at Camp Boat Launch, (Location 436 758)

Float Bridge at Howes Lake, (Location 502 734)

MCOFT: Mobile Conduct of Fire Trainer pad can accommodate 2 trailers but has hookup for 1, (Location 761 445)

Building #329 Distance Learning Center, (Location Bldg. 329)

Remote Targetry package: Range Control now has 24 Frequency controlled targets that are available for training purposes. These will be used to put together specific tailored training that requires elements reaction to surprise. (i.e. Convoy LFX training events, infantry squad LFX etc.)

RANGE 1

- 1) FUNCTION: Combat Pistol Qualification Course (CPQC) & Military Police Firearms Qualification Course (MPFQC).
- 2) FIRING POINTS: 10 Lanes with 7 targets per lane (CPQC),
9 Lanes with barricades (MPQC)
 - Throughput: 20 Soldiers per hour (CPQC)
- 3) LOCATION: FQ740 440
 - Direction of Fire: 356⁰ (Magnetic)
 - Left Lateral Limit: 25⁰ (Magnetic)
 - Right Lateral Limit: 330⁰ (Magnetic)
- 4) WEAPONS & AMMUNITION: Hand Guns
 - .45 cal, 9mm, .38 cal, .40 cal, .22 cal BALL
- 5) TARGETS: Automated target lifter mechanisms w/“E” Type silhouettes on site. There are no lights on targets. Unit need to supply their own chem-lights to attach to targets for night fire. MPQC static silhouettes should be requested if firing MPQC. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”.
- 8) RESTRICTION: Clearance to go down range beyond the 35 meter berm must be received from range control prior to going beyond the berm.
- 9) RANGE ASSETS:
 - Range Control Tower (Metal Structure)
 - Solar latrine (Wooden structure)
 - Ammunition Breakdown Building (Concrete structure)
 - Electricity
 - Lights
 - RF Caswell Target lifters
 - Public Address System

RANGE 2

- 1) FUNCTION: Alternate Combat Pistol Qualification Course
- 2) FIRING POINTS: 18
 - Throughput: 36 Soldiers per hour
- 3) LOCATION: FQ737 441
 - Direction of fire: 342⁰ (Magnetic)
 - Left Lateral Limit: 340⁰ (Magnetic)
 - Right Lateral Limit: 345⁰ (Magnetic)
- 4) WEAPONS AND AMMUNITION: Hand Guns
 - .45 cal, 9mm, .38 cal, .40 cal, .22 cal BALL, & Shotgun
- 5) TARGETS: Green Plastic backer boards for paper targets. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”.
- 8) RESTRICTIONS: Clearance to go down range beyond the 25 meter berm must be received from range control prior to going beyond the berm.
- 9) RANGE ASSETS:
 - Porta-jons available
 - Target storage shed / 24' X 32' Classroom
 - 18 firing points with lighted overhead cover with wooden benches and concrete floor.
 - 18 pistol magazine tables (Wooden structures)
 - Lights

RANGE 3A, 3B

- 1) FUNCTION:
 - Primary: M16/M4 Series Rifles 25 Meter Zero and Qualification.
 - Secondary: M60, M240, M249, M2, .50 Cal SRTA (**Plastic**), 10 Meter Table I and Familiarization on **A**. M249 10 Meter Table I and Familiarization on 3B.
- 2) FIRING POINTS: 3A = 22 – 10 & 25 Meter Firing points
 3A = 10 - .50 cal 10 Meter Plastic Firing Points
 3B = 42 – 10 & 25 Meter Firing points
 - Throughput: 132 Soldiers per hour
- 3) LOCATION: FQ732 440
 - Direction of Fire: 3A - 321⁰ / 3B - 335⁰ (Magnetic)
 - Left Lateral Limit: 3A – 314⁰ / 3B – 334⁰ (Magnetic)
 - Right Lateral Limit: 3A – 330⁰ / 3 B – 336⁰ (Magnetic)
- 4) WEAPONS & AMMUNITION: Rifles & Machineguns
 - 5.56mm, 7.62mm BALL & .50 cal SRTA (**PLASTIC ONLY**)
- 5) TARGETS: “E” Type silhouettes on stave; 3’ X 5’ zero and familiarization fire 10 meter MG Targets. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”
- 8) RESTRICTIONS:
 - Clearance to go down range beyond the 25 meter berm must be received from range control prior to going beyond the berm.
 - Range 3B shall not fire 7.62 Ball.
- 9) RANGE ASSETS: Solar latrine, Target Storage & OIC Stand (Wooden structures), Ammunition Break Down Building (cement block)

RANGE 4

- 1) FUNCTION: Breaching Facility / Urban Assault Course (UAC) Station 3
- 2) FIRING POINTS: Command Scenario Driven with **prior** approval from Range Control.
- 3) LOCATION: FQ 72890 43783
 - Direction of fire: 336 (Magnetic)
 - Right Lateral Limit: 356 (Magnetic)
 - Left Lateral Limit: 309 (Magnetic)
 -
- 4) WEAPONS & AMMUNITION: Hand Guns
 - .45cal, 9mm, .38cal, .40cal, .22cal, 5.56 BALL, 40mm TP (M203)
- 5) TARGETS: 16' X 80' with configurable walls. **COMMAND SCENARIO DRIVEN WITH PRIOR APPROVAL FROM RANGE CONTROL.** (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and Right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING "HOT".
- 8) CONFLICTS: When Range 8 is "Hot" firing 7.62mm ammunition Range 4 can not be "Occupied".
- 9) RESTRICTIONS: Ensure planning requirements are as follows:
 - 120 Days Submit – Live Fire / Range OPLAN Matrix to Range Control Division Chief for Approval
 - 90 Days – Unit Validates T/A, Ranges, & submit Target Request
 - 30 Days Submit – Exception to policy Requests "If necessary"
 - 3 Days Submit / Brief OPLAN – Training Scenario FRAGO's.
 - "**NO 7.62mm.**"
- 10) RANGE ASSESTS: Porta-jons available

RANGE 6A

- 1) FUNCTION: Shotgun Qualification and Fam. Fire
- 2) FIRING POINTS: 16 for Fam Fire, 5 for Qualification
 - Throughput: 32 Soldiers per hour
- 3) LOCATION: FQ714 434
 - Direction of Fire: 20⁰ (Magnetic)
 - Left Lateral Limit: 15⁰ (Magnetic)
 - Right Lateral Limit: 25⁰ (Magnetic)
- 4) WEAPONS & AMMUNITION: All Gauges of Shotguns
- 5) TARGETS: “E” type silhouettes on staves. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”.
- 8) RESTRICTIONS: Clearance to go down range beyond the 25 meter berm must be received from Range Control prior to going beyond the berm.
- 9) RANGE ASSETS:
 - Target storage shed
 - Solar Latrine (Co-located with Range 6B)
 - Barricades with opening for Qualification

RANGE 6B

- 1) **FUNCTION:** M16/M4 Series Rifle 25 Meter Zero & Qualification.
- 2) **FIRING POINTS:** 6B = 30
 - Throughput: 60 Soldiers per hour
- 3) **LOCATION:** FQ714 434
 - Direction of Fire: 20⁰ (Magnetic)
 - Left Lateral Limit: 15⁰ (Magnetic)
 - Right Lateral Limit: 25⁰ (Magnetic)
- 4) **WEAPONS & AMMUNITION:** Rifles - 5.56mm BALL
- 5) **TARGETS:** “E” Type silhouettes on staves. (Range Control does not provide Staple guns, staples or tape).
- 6) **RANGE SAFETY:** Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) **RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”.**
- 8) **RESTRICTIONS:** Clearance to go down range beyond the 25 meter berm must be received from range control prior to going beyond the berm.
- 9) **RANGE ASSETS:**
 - Solar latrine (Wooden structure)
 - Porta-jons available upon request
 - Ammunition Break Down Building (Concrete Structure)
 - Target storage shed (Wooden structure)
 - Range Control Tower (Wooden structure)

RANGE 8

- 1) FUNCTION:
 - Multi-Purpose Machine Gun Range
 - 5.56mm & 7.62mm Ball 800 Meter Machinegun Table II, Table III, and Fam. Fire.
 - a) Center 4 lanes 1000 Meter Machinegun Transition Firing.
 - .50 cal A062 **PLASTIC** 800 Meter Machinegun Fam. Firing.
 - Sniper Course (7.62 Only)
- 2) FIRING POINTS: 10
 - Throughput: 20 Soldiers per hour
- 3) LOCATION: FQ 702 438
 - Direction of Fire: 27° (Magnetic)
 - Left Lateral Limit: 7° (Magnetic)
 - Right Lateral Limit: 57° (Magnetic)
- 4) WEAPONS & AMMUNITION: Machine Gun
 - 5.56mm, 7.62mm BALL, TRACER & .50 cal **PLASTIC**
- 5) TARGETS: Automated Targets with lights and automated scoring. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”:
- 8) RESTRICTIONS: Clearance to go down range beyond 50 meters must be received from Range Control.
- 9) RANGE ASSETS:
 - Metal Tower
 - PA System
 - Indoor Latrine
 - Heated and Cooled Class Room
 - Ammunition Break Down Building
 - Covered Mess Area
 - Bleacher Enclosure

RANGE 9A, 9B

1. FUNCTION: 9A: M16/M4 Series Rifles 25 Meter Zero and Qualification
9B: 10 Meter Machinegun Zero / Familiarization / Qualification
2. FIRE POINTS: 20 each
 - Throughput: 40 Soldiers per hour
3. LOCATION: FQ 6997 4392
 - Direction of fire: 19° (Magnetic)
 - Right Lateral Limit: 1° (Magnetic)
 - Left Lateral Limit: 35° (Magnetic)
4. WEAPONS AND AMMUNITION:
 - 9A: Rifle M16A2/M4 5.56mm Only
 - 9B: Machineguns Rifle M249 & M240B, 5.56mm, 7.62mm BALL & .50 cal A062 **PLASTIC**)
5. TARGETS: 9A: 3' X 5' 25 meter Zero/Familiarization
9B: 3' X 5' 10 meter Zero/Familiarization/Qualification.
(Range Control does not provide Staple guns, staples or tape).
6. RANGE SAFETY: Left and Right limit markers. **NO CROSS LANE FIRING!**
Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
7. RANGE GATES TO BE CLOSED PRIOR TO GOING "HOT".

NOTE: Range gates must be closed before range is occupied or a gate guard must be posted. If gates are open or unlocked notify Range Control immediately.
8. RESTRICTIONS: Clearance to go down range must be cleared through Range Control at all times
9. RANGE ASSESTS: Porta-jons on site
OIC Stand

RANGE 10

- 1) **FUNCTION:** 1000 Yard Known Distance Range with transitional berms at 100, 200, 300, 500, 600, 800, 900 & 1000 yards.
- 2) **FIRING POINTS:** 50
 - Throughput: 100 Soldiers per hour
- 3) **LOCATION:** FQ693 436
 - Direction of Fire: 20⁰
 - Left Lateral Limit: 14⁰
 - Right Lateral Limit: 26⁰
- 4) **WEAPONS & AMMUNITION:** Rifles (**NO MACHINE GUN**)
 - 5.56mm, 7.62mm Ball & .50 cal A062 **PLASTIC**
- 5) **TARGETS:** Regulation targets on fixed carriers. (Range Control does not provide Staple guns, staples or tape).
- 6) **RANGE SAFETY:** Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) **RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”:**
- 8) **RESTRICTIONS:** Do not go **BEYOND** the butts’ area down range.
- 9) **CONFLICTS:**
 - When range 10 is “HOT”, range 11 will not be “Occupied”.
 - When range 11 is “HOT”, Range 10 will not be “Occupied”.
- 10) **RANGE ASSETS:**
 - Solar latrine
 - OIC platform
 - Concrete Ammunition Break Down Building
 - Target Storage Sheds (1ea)

RANGE 11

- 1) FUNCTION: M16/M4 Automated Record Fire (ARF), night fire, NBC firing tables, Practice ALL.
- 2) FIRING POINTS: 10
 - Throughput: 20 Soldiers per hour
- 3) LOCATION: FQ693 440
 - Direction of Fire: 25⁰
 - Left Lateral Limit: 10⁰
 - Right Lateral Limit: 37⁰
- 4) WEAPONS & AMMUNITION: Rifles
 - 5.56mm Ball (Tracers on night fire ONLY)
- 5) TARGETS: Seven (7) “E” & “F” type targets in each lane. Two “F” type targets each at 50 meters, “E” type on each 50 meter interval out to 300 meters. Targets are electric pop-up with automated operation and scoring. 50 Meter targets are equipped with lights for night firing. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”:
- 8) OPERATOR: Coordinate with Range Control for instruction in computer use on this range.
- 9) CONFLICTS:
 - When range 11 is “HOT”, range 10 will not be “Occupied”.
 - When range 10 is “HOT”, Range 11 will not be “Occupied”.
- 10) RANGE ASSETS:
 - Metal Tower
 - Porta-jons
 - Ammo Break Down Building
 - PA System
 - Automated target lifter and scoring system

RANGE 12

- 1) FUNCTION: Fire and Movement Range (OFFENSIVE)
- 2) FIRING POINTS: Squad Size Live Fire
- 3) LOCATION: FQ682 450
 - Direction of Fire: 61^0
 - Left Lateral Limit: 22^0
 - Right Lateral Limit: 110^0
- 4) WEAPONS & AMMUNITION: Rifles - 5.56mm Ball
- 5) TARGETS: Target requests shall be processed through Range Control Building 545. Targets are "E" type silhouettes. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING "HOT":
- 8) RESTRICTIONS: Ensure planning requirements are as follows:
 - 120 Days Submit – Live Fire / Range OPLAN Matrix to Range Control Division Chief for Approval
 - 90 Days – Unit Validates T/A, Ranges, & submit Target Request
 - 30 Days Submit – Exception to policy Requests "If necessary"
 - 3 Days Submit / Brief OPLAN – Training Scenario FRAGO's.
 - "**NO 7.62mm.**"
- 9) RANGE ASSETS:
 - OIC Tower
 - Porta-jons available on request

RANGE 13 (Impact Area)

- 1) FUNCTION: 60mm Mortar Live Fire
- 2) FIRING POINTS: 16 live fire; 4 sub-cal.
 - Throughput: 32/8 per hour
- 3) OBSERVATION POINTS:
 - OP "A" FQ7385 4120
 - OP "B" FQ7315 3864
 - OP "C" FQ7296 3762
- 4) LOCATION: FQ7375 3979 (Flagpole) West end Beaver Creek Rd.
 - Direction of Fire: See Firing Point Index List
 - Left Lateral Limit: See Firing Point Index List
 - Right Lateral Limit: See Firing Point Index List
- 5) AMMUNITION: Mortars
 - 60mm TP, WP, HE, SMK & ILL.
- 6) TARGETS: Stationary targets and hulls. (Range Control does not provide Staple guns, staples or tape).
- 7) RANGE SAFETY: Units will receive approved, signed safety card(s) from the Camp Grayling Range Officer prior to occupying the range. **"NO OVERHEAD FIRING IS PERMITTED!"** Units will provide road guards blocking access in front of gun positions while live firing. Allow traffic to pass as soon as possible at the end of each mission. Scarlet streamer is to be displayed during daylight firing and flashing red light during night fire.
- 8) GATES AND ROADBLOCKS: Road guards and roadblocks are required on the left and right limits of firing position. Beaver Creek gate (FQ738397) will be closed and locked.
- 9) CONFLICTS: Range 13 **CANNOT** go "HOT" if Range 14 & 15 are occupied.
- 10) RESTRICTIONS:
 - **AT NO TIME ARE PERSONNEL ALLOWED TO ENTER THE FENCE, THIS IS A DUD IMPACT AREA!**
 - Reference page 56 for MORTAR Conflicts on Range 13.
 - Scheduling of EOD 13 will close all Firing points supported by Range 13.
- 11) FIRING POINTS: The following listed FP's are the only approved and established FP's that will be used on the Range 13 complex. The OIC will ensure only proper firing positions are occupied and safety data sheets or safety T's are on hand for each specific FP.

RANGE 13								4.2" w/60MM				60MM - M224					
Firing Point Index List (Revised Jun 97) 60mm Mortar								Max CHG M49A4		Min CHG M49A4		Max CHG			Min CHG		
Firing Point	Grid Coordinate	Elevation (M)	Direction of Fire (AZ)	Left Limit (AZ)	Right Limit (AZ)	Max Range (M)	Min Range (M)	INC	SHT	INC	SHT	M49	M720	M888	M49	M720	M888
13-01	73266 41147	0395	3475	3200	3750	1600	0600	3	14	0	24	3	1	1	1	1	1
13-02	73593 41415	0398	3600	3350	3850	1600	0600	3	14	0	24	3	1	1	1	1	1
13-03	73787 41038	0406	3925	3650	4200	1600	0600	3	14	0	24	3	1	1	1	1	1
13-04	73982 40584	0401	4175	3963	4450	1600	0600	3	14	0	24	3	1	1	1	1	1
13-05	73775 40139	0393	4425	4100	4638	1500	0600	3	04	0	24	3	1	1	1	1	1
13-06	74004 39925	0391	4700	4283	4869	1500	0600	3	04	0	32	3	1	1	1	1	1
13-07	74015 39692	0390	4850	4600	5100	1500	0600	3	14	0	32	3	1	1	1	1	1
13-08	74161 39555	0387	5050	4700	5400	1500	0600	3	04	0	24	3	1	1	1	1	1
13-09	72166 38002	0382	6350	6255	0195	1500	0600	3	14	0	24	3	1	1	1	1	1
13-10	72668 38681	0387	0050	6100	0400	1350	0600	3	14	0	24	3	1	1	1	1	1
13-11	72503 37754	0382	0100	6250	0350	2100	1600	--	--	-	--	-	-	-	-	-	-
13-12	72346 37782	0384	0180	6330	0430	2100	1600	--	--	-	--	-	-	-	-	-	-
13-15	71630 40019	0393	1700	1450	1950	1500	0600	3	14	1	12	3	1	1	1	1	1
13-16	72199 40527	0387	2600	2200	3000	1300	0600	3	06	0	24	3	1	1	1	1	1
OP A	7385 4120	0431	3900	3678	4160	2000	1000	4		1	32	4	2	1	2	1	1
OP B	7315 3864	0417	6030	5605	0065	1600	0700	3	14	1	08	3	1	1	1	1	1
OP C	7296 3762	0423	6300	6042	0160	2400	1800										
SUBCAL Training Areas																	
13-A1	7141 3934	384.1															
13-A2	7149 3959	383.3															
13-A3	7263 3824	387															
14	7159 3947	380.0															
Range 8 Illumination Rounds Data (Note: Use time fixed at 12.5 seconds)																	
NOTE: Lights are on all targets on Range 8																	

RANGE 14

- 1) FUNCTION: Mortar and Howitzer sub-caliber trainer.
- 2) FIRING POINTS:
 - 8 Mortar
 - 6 Howitzer
 - Throughput: 14/12 per hour
- 3) LOCATION: FQ716 393
 - Direction of Fire: 45⁰
 - Left Lateral Limit: 25⁰
 - Right Lateral Limit: 60⁰
- 4) AMMUNITION: Mortar & Howitzers
 - 81mm SABOT, 105mm sub-caliber
- 5) TARGETS: Concrete, Stationary. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Fire into designated areas only.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”
- 8) CONFLICTS: Range 14 **CANNOT** be occupied if Range 13 or 15 is “HOT”.
- 9) RESTRICTIONS:
 - No personnel are allowed inside the fence while any firing points are “HOT”.
 - Coordinate with Range Control for key to the range gate and targets.
 - Range 14 **DOES NOT** include FP's 13A1M & 13A2M. These are separate SUBCAL firing points.

RANGE 15

- 1) FUNCTION:
 - Primary - M203 Grenade Launcher
 - Secondary - AT 4 & SUBCAL
- 2) FIRING POINTS:
 - M203 = 4 Lanes with 4 positions each.
 - 5 Lanes for AT 4/SUBCAL
 - Throughput: 8 per hour M203, 10 per hour AT 4
- 3) LOCATION: FQ723 407
 - Direction of Fire: 180⁰
 - Left Lateral Limit: 170⁰
 - Right Lateral Limit: 190⁰
- 4) AMMUNITION: M203 Grenade Launcher
 - 40mm TP, ILL, HE, & SMK. AT 4 and LAW (SUBCAL ONLY)
- 5) TARGETS: Zero Panel, one man bunker, two man bunker, 3 man machine gun position, window target, and troops in open. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) CONFLICTS: Range 15 CANNOT be occupied if Range 13 or 14 is "HOT".
- 8) RESTRICTONS: **Minimum safe engagement distances for high explosive 40mm Rounds are:**
 - All HE Rounds: **165 METERS**
 - At no time are personnel allowed past the firing positions to go down range. This is a dud impact area!!
 - Range will support 2 lanes (4 stations each) of qualification with M203 HE rounds, or support 4 lanes (4 stations each) of qualification with M203 TP rounds.
- 9) RANGE ASSETS:
 - OIC Tower
 - Porta-jons

RANGE 16

- 1) FUNCTION: M16/M4 Series Rifles 25 Meter Zero and Qualification
- 2) FIRING POINTS: 33
 - Throughput: 66 Soldiers per hour
- 3) LOCATION: FQ691 477
 - Direction of Fire: 137⁰
 - Left Lateral Limit: 133⁰
 - Right Lateral Limit: 146⁰
- 4) WEAPONS & AMMUNITION: Rifles - 5.56mm BALL
- 5) TARGETS: Green plastic backer boards that will support M16/M14 zero targets using tape or staples (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”:
- 8) RANGE ASSETS:
 - Target storage shed
 - Porta-jons
 - OIC platform
 - Concrete Ammunition Break Down Building
 - Foot path available to access ARF Ranges 18 & 19

RANGE 17

- 1) FUNCTION: Hand Grenade Familiarization
- 2) FIRING POINTS: Three (3) throwing bays
 - Throughput: 6 Soldiers per hour
- 3) LOCATION: FQ736 398
 - Direction of Fire: 115⁰
- 4) AMMUNITION: Hand Grenades, fragmentation
- 5) RANGE SAFETY: Impact area is within the berm area. **DO NOT THROW GRENADES OUT OF THE CLEARED AREA.** Other safety features are left and right limit markers. **NO CROSS LANE THROWING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire. **IMMEDIATELY CALL RANGE CONTROL WHEN RANGE 17 IS VACATED AND THE GATE IS LOCKED AND CLOSED!**
- 6) GATES AND ROADBLOCKS:
 - Gate going into range (impact area) must be manned when range is “Hot”.
- 7) RESTRICTIONS: At no time are personnel allowed past the throwing positions. This is a DUD impact area!! Can not go “Hot” when mortars are being fired (see figure on page 19).
- 8) RANGE ASSETS:
 - Porta-jons available on request

RANGE 17A

- 1) **FUNCTION:** Hand Grenade Qualification Course. (Designed to meet the standards of FM 23-30)
- 2) **FIRING POINTS:** Seven (7) stations for individual tasks associated with qualification.
 - Throughput: 14 Soldiers per hour
- 3) **LOCATION:** FQ741 703
- 4) **WEAPONS & AMMUNITION:** Hand Grenades - **PRACTICE GRENADES ONLY!**
- 5) **TARGETS:** Each station has a different objective associated with qualification.
- 6) **RANGE SAFETY:** Unit specific Composite Risk Management Measures
- 7) **GATES AND ROADBLOCKS:** Gates shall be closed and locked only when range is “Hot”. Gates are located on both the east & west sides of the range access road.
- 8) **RESTRICTIONS:** **Practice grenades only, no fragmentation allowed!**

RANGE 18

- 1) FUNCTION: M16/M4 Automated Record Fire (ARF), night fire, CBRN firing tables.
 - No 7.62mm unless cleared by Range Control Safety Officer.
- 2) FIRING POINTS: 9 Foxhole positions
 - Throughput: 18 Soldiers per hour
- 3) LOCATION: FQ690 474
 - Direction of Fire: 135⁰
 - Left Lateral Limit: 127⁰
 - Right Lateral Limit: 150⁰
- 4) WEAPONS & AMMUNITION: Rifles
 - 5.56mm BALL (Tracers on night fire ONLY).
- 5) TARGETS: Seven (7) targets in each lane. Two targets each at 50 meters, and then targets at one each at 50 meter interval out to 300 meters. Targets are electric pop-up with automated operation and scoring. CASWELL target lifter mechanisms hardwired on “E” type silhouettes on site. 50 Meter targets are equipped with lights for night firing. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RESTRICTION: **DO NOT** go down range without approval from Range Control.
- 8) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”
- 9) OPERATOR: Coordinate with Range Control for instruction in computer use on this range.
- 10) RANGE ASSETS:
 - OIC Tower
 - Public address system
 - Mess area
 - Ammunition Break Down Building
 - Solar latrine
 - Classroom
 - Automated target lifters & scoring system

RANGE 19

- 1) FUNCTION: RETS M16/M4 Automated Record Fire (ARF), night fire, CBRN firing tables.
 - No 7.62mm unless cleared by Range Control Safety Officer.
- 2) FIRING POINTS: 16 Foxhole Positions
 - Throughput: 32 Soldiers per hour
- 3) LOCATION: FQ696 479
 - Direction of Fire: 145⁰
 - Left Lateral Limit: 137⁰
 - Right Lateral Limit: 168⁰
- 4) WEAPONS & AMMUNITION: Rifles
 - 5.56mm BALL (Tracers on night fire ONLY).
- 5) TARGETS: Seven (7) targets in each lane. Two targets each at 50 meters, and then targets at one each 50 meter interval out to 300 meters. Targets are electric pop-up with automated operation and scoring. CASWELL target lifter mechanisms hardwired on “E” type silhouettes on site. 50 Meter targets are equipped with lights for night firing. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) RESTRICTION: **DO NOT** go down range without approval from Range Control.
- 8) RANGE GATE TO BE CLOSED PRIOR TO GOING “HOT”:
- 9) OPERATOR: Coordinate with Range Control for instruction in computer use on this range.
- 10) RANGE ASSETS:
 - OIC Tower
 - Public address system
 - Ammunition Break Down Building
 - Solar latrine
 - Mess area
 - Target storage area
 - Automated target lifters and scoring

RANGE 20

- 1) FUNCTION: Light Demolition Range
- 2) LOCATION: FQ704 430
- 3) AMMUNITION: TNT, C-4, CLAYMORES, COMP B, DET CORD, TIME FUSE, BLASTING CAPS, SHAPED CHARGES, AT & AP MINES. Demolitions shall not exceed **40 POUNDS crater or 20 POUNDS surface** in any combination. Bangalore Torpedo's can ONLY detonate one (1) section at a time.
- 4) RANGE SAFETY: As required for materials being used. Pits will be located so firers see all other pits and the immediate vicinity of the pits. Blasting caps will be stored at least 100 meters from ammunition and explosives. No smoking within 100 meters of ammunition and explosives. **Helmets shall be worn on this range at all times.** Scarlet streamer is to be displayed during daylight and flashing red light during night use.
- 5) GATES TO BE CLOSED AND MANNED PRIOR TO GOING HOT:
 - Front Gate to range must be manned and back gate must be locked.
- 6) RESTRICTIONS:
 - Only qualified demolitions instructors will be used for training personnel on this range.
 - (NOTE: NO STEEL CUTTING)
 - **DEMOLITION RECONNAISSANCE (DA-2203-R) PLAN MUST BE TURNED IN TO RANGE CONTROL FOR APPROVAL NLT 48 HOURS PRIOR TO OCCUPATION OF THIS RANGE.** Late plans, improper plans or not following your plan will result in loss of training time on this facility.
- 7) RANGE ASSETS:
 - OIC platform
 - Porta-jons available

RANGE 21

- 1) FUNCTION: Engineer Demolition Training Area
- 2) LOCATION: FQ694 419
- 3) AMMUNITION: TNT, C-4, CLAYMORES, COMP B, DET CORD, TIME FUSE, BLASTING CAPS, SHAPED CHARGES. Demolitions shall not exceed **40 POUNDS crater or 20 POUNDS surface** in any combination. Bangalore Torpedo's can **ONLY** detonate one (1) section at a time. (Cratering, abatis, or other barrier/anti-barrier missions).
- 4) RANGE SAFETY: As required for materials being used. Pits will be located so firers can see all other pits and their immediate vicinity. Blasting caps will be stored at least 100 meters from other ammunition and explosives. No smoking within 100 meters from ammunition and explosives. **Helmets shall be worn on this range at all times.** Pit location (69540 41959), Abatis (69539 42285), Bridge (69583 42458). Scarlet streamer is to be displayed during daylight and flashing red light during night use.
- 5) GATES AND ROADBLOCKS:
 - Front Gate to range must be manned and back gate must be locked.
- 6) RESTRICTIONS:
 - Only qualified demolitions instructors will be used for training personnel on this range.
 - **NO STEEL CUTTING**
 - **DEMOLITION RECONNAISSANCE PLAN (DA 2203-R) MUST BE TURNED INTO RANGE CONTROL FOR APPROVAL NLT 48 HOURS PRIOR TO OCCUPATION OF THIS RANGE.**
 - Late plans, improper plans or not following your plan will result in loss of training time on this facility.
- 7) RANGE ASSETS:
 - Blowable Bridge:
 - a) Small, steel girder bridge with three foot wooden spaces for practicing charge placements. Designed to swing free after wooden sections are blown.
 - b) **DO NOT IN ANY WAY; PLACE CHARGES SUCH THAT THE STEEL IS CUT, FRAGMENTED OTHERWISE DAMAGE THIS FACILITY.**
 - c) **CHARGES RESTRICTED TO 20 POUNDS**
 - d) Hardened bunkers for bridge & abates
 - Abatis:
 - a) Unit may emplace and blow abatis in hardened abatis positions
 - b) **CHARGES RESTRICTED TO 24 POUNDS TOTAL**
 - c) Abatis materials must be requested through Range Control Bldg 545 NLT 48 hours prior to range occupation.
 - d) Do not place charges that will damage concrete at base.
 - Note: Class IV barrier supplies must be requested through Bldg 560.

RANGE 30 COMPLEX

- 1) DESCRIPTION: The Range 30 Complex is a multi use range that encompasses approximately 5261 acres (inside fence). This range complex has the following functions:
 - Multi Purpose Range Complex
 - a) Tank Gunnery
 - b) Company Live Fire Exercise (Charlie Lane)
 - c) Aerial Gunnery
 - d) Helicopter Door Gunnery
 - e) TOW (INERT)
 - f) TOW Tracking (TFTT)
 - g) 50 cal Transition (Mounted/dismounted)
 - CIED Lane: 6 teaching stations (RCIED, CWIED, VBIED, VOIED, PBIED, EFP)
 - Range 31: 50 CAL TABLE II MODIFIED, 10 METER (ZERO)
 - Range 35: Abrams Screening, MICLIC, & Loomis Battery
 - Range 36: MLRS/HIMARS, Calibration/Maintenance Staging Area, LASER Range Finder
 - Range 37: Mk 19 Qualification Course 2 Lanes (DODIC B576/BA12 Only)
 - Range 38: Convoy Live Fire Exercises
 - Range 39: Infantry Platoon Battle Course (IPBC) and/or Multiple Integrated Laser Engagement System (MILES)

- 2) LOCATION: FQ877 538

- 3) WEAPONS & AMMUNITION: (See function above for Weapons)
 - 5.56mm & 7.62mm BALL / TRACER, .50cal BALL/AP & TRACER, 105mm & 120mm SABOT/HEAT, TOW Missiles (INERT WARHEADS only), 20mm Cannon, Avenger ADS, LASER, MLRS (RRPR) & 40mm TP (BA12 & B576 Only)

- 4) TARGETS: 8 ea. Moving Armor Targets, 37 Stationary Armor Targets, 33 Infantry Moving Targets, 115 Stationary Infantry Targets, Bore Sight Panels, "E" type silhouettes, APC's, M60's, Remote controlled moving targets, Stationary Plywood & remote controlled E type infantry silhouettes.

- 5) RANGE SAFETY: See Range Operations Requirements Paragraph 8 below.

- 6) ROADBLOCKS & GATES: Roving Patrol / Road Guards: Roving patrol will be used to monitor Stephan and Wakeley Bridge Road Gates. Road guards will be used on Bald Hill Road when required. Roving Patrol procedures will be explained by 30 Complex personnel when scheduling range or upon unit arrival. Depending on weapon system used, the following will be required for Roving Patrols.
 - When Small Fan is locked down, 1 Vehicle, 2 Personnel.
 - When Large Fan is locked down, 2 Vehicles, 4 Personnel.
 - Road Guards still required on Bald Hill Road when Large Fan is locked down.
 - **Note:** Roving Patrol must be in place prior to fly-over/drive through taking place.

7) RESTRICTIONS: The following apply to all users of the 30 Complex:

- **NO DUD PRODUCING ROUNDS**
- **NO INDIRECT FIRE SYSTEMS TO BE USED**
- Noise abatement procedures:
 - a) The following weapons systems are to cease fire daily from three (3) hours after sunset until sunrise the following day:
 - (i) Tank Main Gun
 - (ii) Helicopter Aerial & Door Gunnery
 - (iii) TOW
 - (iv) Bradley Fighting Vehicle
 - b) These same weapons are subject to cease fire on the following designated holiday weekends from 1600 hours Friday until sunrise on Tuesday: **MEMORIAL DAY, & LABOR DAY, FOURTH OF JULY** until sunrise 5 July.
 - c) The same systems are required to cease fire on the opening weekend of Trout Fishing Season from 3 hours after sunset on Friday, until sunrise on the following Monday. Michigan's Trout opener is normally the last Saturday in April.
 - (i) NOTE: FIRING TIMES ARE ESTABLISHED AND PUBLISHED BY RANGE CONTROL.
 - d) All 30 Complex ranges "check-fire" status shall be reported on 800 MHz or 37.00 to 30 Control.

8) RANGE OPERATIONS REQUIREMENTS:

- a) Using Units shall provide Camp Grayling Range Officer training plan / scenario for review **NLT 120 Days** prior to training execution.
- b) Range Control will provide a computer operator, target maintenance personnel and LNO Officer/NCO during the use of the MPRC.
- c) Using units shall notify Range Control if there is a delay in arrival to the MPRC.
- d) The using unit shall provide an OIC, RSO, range safeties, target detail and radio operator for tower operations.
- e) The unit "OIC" will occupy the MPRC Tower **AT ALL TIMES** while the range is in a "HOT" or "CHECKFIRE" status. Depending on what range is in use. See Range Control Personnel for further assistance.
- f) Anytime the OIC has to vacate the tower the range will go "COLD". Depending on what range is in use. See Range Control Personnel for further assistance.
- g) Radio communications will be maintained and monitored at all times with FM capability to 30 Control, road guards and down range safety personnel. In the event of lost communication the range will automatically be placed into a "CHECKFIRE" until communication is restored.

- h) Scarlet streamers shall be displayed during daylight use and flashing red light during night use in two locations MPRC Tower and entrance to the range at Headquarters road.
- i) **Unit will schedule and confirm all required fly-overs.**
- j) **Drive through requests must be submitted in writing NLT 30 Days.**
- k) Controlling unit will occupy and control the range complex from the MPRC Tower, Radio call sign “30 Control”. Controlling unit is normally the senior command utilizing this range. **This will be established when scheduled. Reference Range 30 Complex SOP.** Depending on what range is in use. See Range Control Personnel for further assistance.
- l) Target requests **MUST** be submitted to Range Officer **NLT 90 Days** prior to scheduled training event.
- m) Range 30 Control will initiate radio checks hourly **ON THE HALF HOUR** for all firing points. For instance, if the firing point is occupied at 0810hrs., the next radio check will be at 0830hrs, then 0930, 1030 etc., until the unit goes “COLD” disposes, or otherwise leaves the Range 30 Complex. **Internal FM Range Frequency is 37.00 MHz.** For Ranges on the 30 Complex (MPRC, 31, 35, 36, 37, 38, 39), 30 Control will contact Range Control at the **TOP OF THE HOUR.**
- 9) COMPLEX ASSETS:
- Control Tower with 2 Levels
 - Heated Multi-purpose building with Latrine & AAR room
 - AFIST Building #1420
 - TTS Scoring equipment
 - Weather Station
 - Viewing area w/bleachers
 - Covered Mess Area
 - Ammunition Loading Platform
 - Porta-jons available upon request
 - Bivouac area
 - Automated Target Mechanisms
 - Gate Guard Building
 - Range Control Target Maintenance Building #1480
 - Full ROCA Package

TANK GUNNERY (MPRC)

- 1) FUNCTION:
 - Tank Table (s) Qualification
 - Tank Crew Proficiency
- 2) LOCATION: FQ877 538
 - Direction of Fire: Grid 60⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) WEAPONS & AMMUNITION: Tanks
 - 7.62mm BALL & TRACER, .50cal BALL/AP & TRACER, 105mm SABOT/HEAT & 120mm SABOT/HEAT
- 4) LANES (3):
 - Alpha Lane
 - a) 8 Defensive Defilade Positions (4 on each lane road)
 - b) 6 Offensive Fire Boxes (3 on each lane road)
 - Bravo lanes
 - a) Bore Sight Main Gun
 - b) Bore Sight and Test fire .50cal MG, 7.62mm COAX MG
 - Charlie Lane
 - a) 8 Defensive Defilade Positions (4 on each lane road)
 - b) 6 Offensive Fire Boxes (3 on each lane road)
- 5) TARGETS:
 - Alpha Lane:
 - a) 4 ea. Moving Armor Targets
 - b) 19 Stationary Armor Targets
 - c) 6 Infantry Moving Targets
 - d) 45 Stationary Infantry Targets
 - Bravo lane:
 - a) Stationary Bore Sight Panels
 - b) 10 meter .50cal zero targets (dismounted)
 - c) .50cal zero/transition targets
 - Charlie Lane:
 - a) 4 ea. Moving Armor Targets
 - b) 18 Stationary Armor Targets
 - c) 27 Infantry Moving Targets
 - d) 70 Stationary Infantry Targets

- 6) RANGE SAFETY: Left and right limit markers, for each lane and range itself. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing, flashing red light during night fire.
- 7) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 8) RESTRICTIONS: See Pg 30 (Restrictions)
- 9) RANGE OPERATIONS REQUIREMENTS: See Pg 30 (Range Operations Requirements).
- 10) RANGE ASSETS: See Pg 31 (Complex Assets)

AERIAL GUNNERY (MPRC)

- 1) **FUNCTION:** Practice and qualification for helicopter delivered weapons and sub-caliber ADS (Air defense system)
- 2) **LOCATION:** FQ877 538
 - Direction of fire: 60⁰
 - Left Lateral Limit: Front (FQ89294 55152) / Back (FQ91373 55909)
 - Right Lateral Limit: Front (FQ89640 54040) / Back (FQ91281 54683)
- 3) **WEAPONS & AMMUNITION:** TOW & Machine Gun
 - TOW Missiles (INERT WARHEADS only), 20mm Cannon, 7.62mm Ball, Avenger ADS .50 caliber
 - **NOTE: NO 2.75 ROCKETS WILL BE FIRED ON THE MPRC**
- 4) **TARGETS:** Automated & Stationary moving armor / infantry targets.
- 5) **RANGE SAFETY:** Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) **ROAD BLOCKS & GATES:** See Pg 29 (Roadblocks & Gates)
- 7) **RESTRICTIONS:**
 - See Pg 30 (Restrictions)
 - Altitude for firing is restricted, maximum altitude for firing will be determined by Range Control.
- 8) **RANGE OPERATIONS:** See Pg 30 (Range Operations Requirements)
- 9) **RANGE ASSETS:** See Pg 31 (Complex Assets)

HELICOPTER DOOR GUNNERY (MPCR)

- 1) FUNCTION: Helicopter Door Gunnery Qualification
- 2) LOCATION: FQ877 538
 - Direction of fire: 60⁰
 - Left Lateral Limit: Front (FQ89294 55152) / Back (FQ91373 55909)
 - Right Lateral Limit: Front (FQ89640 54040) / Back (FQ91281 54683)
- 3) WEAPONS & AMMUNITION: Machine Gun - 7.62mm BALL
- 4) TARGETS: Automated & Stationary moving armor / infantry targets.
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) RESTRICTIONS:
 - See Pg 30 (Restrictions)
 - Altitude for firing is restricted, maximum altitude for firing will be determined by Range Control.
- 8) RANGE OPERATIONS: See Pg 30 (Range Operations Requirements)
- 9) RANGE ASSETS: See Pg 31 (Complex Assets)

VEHICLE MOUNTED TOW MISSILE (MPRC)

- 1) FUNCTION: Vehicle mounted TOW Missile Fire (**INERT WARHEADS ONLY**)
- 2) LOCATION: FQ877 538
 - Direction of Fire: Grid 60⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) WEAPONS & AMMUNITION: TOW Missile (**INERT WARHEADS ONLY**)
- 4) TARGETS: Automated & Stationary moving armor / infantry targets.
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) RESTRICTIONS:
 - See Pg 30 (Restrictions)
 - The MPRC is considered a **CLEAN RANGE**, therefore, the unit **MUST** police up the guide wire expelled during the TOW firing. Failure will result in delay of range clearance.
- 8) RANGE OPERATIONS: See Pg 30 (Range Operations Requirements)
- 9) RANGE ASSETS: See Pg 31 (Complex Assets)

**TOW MISSILE (MPRC)
(TOW FIELD TACTICAL TRAINER (TFTT))**

- 1) **FUNCTION:** Qualification of TOW Tables using the TFTT
- 2) **LOCATION:** FQ877 538
 - Direction of Fire: Grid 60⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) **WEAPONS & AMMUNITION:** TOW Missile (**INERT WARHEADS ONLY**)
- 4) **TARGETS:** Automated & Stationary moving armor / infantry targets.
- 5) **RANGE SAFETY:** Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) **ROAD BLOCKS & GATES:** See Pg 29 (Roadblocks & Gates)
- 7) **RESTRICTIONS:** See Pg 30 (Restrictions)
- 8) **RANGE OPERATIONS REQUIREMENTS:**
 - See Pg 30 (Range Operations Requirements)
 - LASER Eye Safe distance to be utilized is 250 meters.
 - Safety personnel are to follow qualifying vehicle down range, with knowledge of TFTT system.
 - Utilizing unit must provide Range Control the Retro Reflectors associated with the TFTT, for mounting to requested targets. Or request through Camp Grayling TSA LTID's (LASER Target Interface Device(s) equipment, for use on the targets, for scoring purposes).
- 9) **RANGE ASSETS:** See Pg 31 (Complex Assets)

RANGE 31

- 1) FUNCTION: 3 Lanes Zero & Transition for mounted/dismounted M2 MG, .50cal
- 2) LOCATION: FQ877 538
 - Direction of Fire: Grid 60⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) WEAPONS & AMMUNITION: Machine Gun - .50Cal BALL
- 4) TARGETS: Table II automated armor / infantry targets, for transition firing, automated stationary & moving armor / infantry targets. (Range Control does not provide Staple guns, staples or tape).
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) RESTRICTIONS: See Pg 30 (Restrictions)
- 8) RANGE OPERATIONS REQUIREMENTS:
 - See Pg 30 (Range Operations Requirements)
 - Machinegun Zero will be utilized with 3 X 5 targets supplied for the 10 meter distance.
 - 500 meter Field Zero.
 - Machinegun transition dismounted – Machinegun targets will be placed down range, by range control at specified distances.
 - Mounted Machineguns can utilize target scenario using the automated & moving targets associated with the range.
 - Mounted & dismounted qualification on Table II modified can utilize automated stationary armor / infantry targets
- 9) RANGE ASSETS: See Pg 31 (Complex Assets)

RANGE 35

- 1) FUNCTION:
 - M1 Abrams 105mm Main Gun Bore Sighting
 - Detonation of Mine Clearing Line Charge (MICLIC – INERT ONLY)
- 2) LOCATION: FQ877 538
 - Direction of Fire: Grid 40⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) WEAPON & AMMUNITION: 105mm/120mm SABOT/HEAT, MICLIC Practice Rocket
- 4) TARGETS: Stationary 4 X 8 Bore Sight Wooden Armor Panels placed at required distances.
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) RESTRICTIONS:
 - See Pg 30 (Restrictions)
 - Maximum elevation for Tank fire is 5⁰
 - MICLIC Training on this range requires closing Charlie Lane.
- 8) RANGE OPERATIONS REQUIREMENTS: See Pg 30 (Range Operations Requirements)
- 9) RANGE ASSETS: See Pg 31 (Complex Assets)

RANGE 36

- 1) FUNCTION:
 - Staging & pre-qualification check facility
 - Maintenance & calibration area
 - MLRS/HIMARS with Reduced Range Practice Round (RRPR)
- 2) LOCATION: FQ877 538
- 3) WEAPON & AMMUNITION: MLRS (RRPR), HIMARS
- 4) TARGETS: Bore Sight Panel Only
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) CONFLICTS: When LASER “HOT”, LFAS line SHALL NOT be occupied.
- 8) RESTRICTIONS:
 - See Pg 30 (Restrictions)
 - The use of the LASER range finder must be maintained at eye safe distance and not used while troop activity is in the area.
 - No Live Firing on this range.
 - Gunners and trainers at launch position must wear protective vest, eye, and ear protection.
- 9) RANGE OPERATIONS REQUIREMENTS: See Pg 30 (Range Operations Requirements)
- 10) RANGE ASSETS:
 - See Pg 31 (Complex Assets)
 - This range area is a joint use facility while the MPRC is being utilized for Tank Gunnery. Located behind the MPRC tower it provides ample area for maintenance & calibration of armor equipment. Additionally, POL and bivouac sites can be maintained within this area.

RANGE 37

- 1) FUNCTION:
 - MK 19 40mm practice and qualification (Day/Night)
 - Advanced Crew Gunnery (Day/Night)
 - MP practice and qualification (Day/Night)
- 2) FIRING POINTS: 2 (Vehicle or Tripod)
 - Throughput: 4 per hour
- 3) LOCATION: FQ865 515
 - Direction of Fire: Grid 48⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 4) WEAPONS & AMMUNITION: (See function above for weapons)
 - 40mm TP (DODIC: BA12 and B576 / Model: M385A3 Only).
- 5) TARGETS:
 - 2 remote controlled moving targets at 800 & 1500 meters, 10 stationary armor targets, and 4 stationary infantry targets.
 - Stationary Plywood & remote controlled targets.
 - Range Control does not provide Staple guns, staples or tape.
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 7) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 8) RESTRICTIONS:
 - See Pg 30 (Restrictions)
 - Gunners and trainers at launch position must wear protective vest, eye, ear protection & Kevlar helmet.
- 9) RANGE OPERATIONS REQUIREMENTS: See Pg 30 (Range Operation Requirements)
- 10) COMPLEX ASSETS: See Pg 31 (Complex Assets)

RANGE 38

- 1) **FUNCTION:** Convoy Commanders Reaction Course.
 - Convoy Live / Blank Fire
- 2) **LOCATION:** FQ877 538
 - Direction of Fire: Scenario Driven
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) **WEAPONS & AMMUNITION:** Rifle / Machinegun
 - 5.56mm, 7.62 ball, .50 Cal, Short range training ctg, Slap Rounds
- 4) **TARGETS:** Automated stationary Armor / Infantry Targets. (Range Control does not provide Staple guns, staples or tape).
- 5) **RANGE SAFETY:** Limit Markers Designate Start / Cease fire areas. **NO CROSS LANE FIRING.** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire. Each vehicle will have an OC/T provided by the using agency/unit monitoring safe weapons firing during all convoy live fire exercises. OC/T's will receive safety brief from Range Control personnel.
- 6) **ROAD BLOCKS & GATES:** See pg. 29 (Road Blocks & Gates)
- 7) **RESTRICTIONS:** See pg. 30 (Restrictions)
- 8) **RANGE OPERATIONS REQUIREMENTS:**
 - see page 30 (Range Operations Requirements)
 - OC/T provided by the using agency/unit will ride in each vehicle.
 - OC/T will receive brief from Range Control personnel prior to going HOT.
 - Training Plan of Operation shall be submitted to Range Control NLT 120 days prior to scheduled use.
- 9) **COMPLEX ASSETS:** See pg. 31 (Complex Assets)

RANGE 39

- 1) FUNCTION: Infantry Platoon Battle Course
- 2) LOCATION: FQ877 538
 - Direction of Fire: Grid 60⁰
 - Left Lateral Limit: Scenario Driven
 - Right Lateral Limit: Scenario Driven
- 3) WEAPONS & AMMUNITION: Rifle / Machinegun
 - 5.56mm, 7.62 BALL / TRACER & .40mm TP (M203)
- 4) TARGETS: Automated & Stationary moving armor / infantry targets. Additionally, Charlie lane has an Assault House for use during live fire exercises. (Range Control does not provide Staple guns, staples or tape).
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) ROAD BLOCKS & GATES: See Pg 29 (Roadblocks & Gates)
- 7) RESTRICTIONS: See Pg 30 (Restrictions)
- 8) RANGE OPERATIONS REQUIREMENTS:
 - See Pg 30 (Range Operations Requirements)
 - Multiple Integrated Laser System (MILES): The use of MILES for an infantry battle course has the same requirements for use as a live fire exercise, with the following exceptions & requirements:
 - a) No road guards are required for Stephan Bridge Road
 - b) Unit is responsible for requesting MILES & LTIDS from the Ft McCoy. Ft McCoy is the approval authority for issue of MILES through satellite station at Camp Grayling at building 560. Ft McCoy Requests must be submitted as follows:
 - c) Annual Training Periods Only – S: 30 January Annually
 - d) IDT Periods Only – S: 90 days prior to training execution
 - LFX/STX training plan of operation shall be submitted to range control **NLT 120 Days** prior to scheduled use.
- 9) COMPLEX ASSETS: See Pg 31 (Complex Assets)

RANGE 40 COMPLEX (Impact Area)

- 1) **DESCRIPTION:** The Range 40 Complex is a multi-use range that is bordered by County Road 612 on the South, Sherman Road on the West, the North Branch of the Ausable River on the North and East. Of the approximately 27,300 total acres, 5,300 acres are a fenced impact area. This range complex has the following functions:
 - Artillery, w/59 surveyed FPs.
 - Air-to-ground Range
 - Mortars, w/32 surveyed FPs
 - DRAGON Anti-Armor System
 - TOW (INERT), JAVLIN
 - LAW, AT-4 HEAT, SMAW, KARL GUSTOV
 - Helicopter Gunnery
 - Combat Engineer Vehicle
 - Recoilless Rifle
 - Laser Target Designator
 - Range 41: MK19 Qualification Course 2 Lanes.
 - Range 43: Squad/Platoon Offensive Live Fire Course and Heavy Demolition Range
 - Range 45: .50 Cal (M2) TABLE II MODIFIED
 - Range 50: 25 Meter Rifle, Pistol and Shotgun Zero/Qualification

- 2) **LOCATION:** FQ 936 660

- 3) **WEAPONS AND AMMUNITION:** (See function above for weapons)
 - 5.56mm & 7.62mm Ball / Tracer, .50cal Ball/AP & Tracer, 105mm & 155mm Artillery, 60mm, 80mm, & 120mm Mortar, 20mm & 30mm Cannon, 40mm HE/TP (MK19), BDU 33, BDU 50 Cement 500lbs, MK82 Live 500lb, & Laser.

- 4) **RANGE OPERATION REQUIREMENTS:**
 - a) Contact Range Control for locations of OPs, firing points, azimuth markers, survey control points, and any other firing data required for scheduled use of this complex.
 - (i) **NOTE:** Due to the multitude of functions of this area, all use must be carefully coordinated between MACOMs, Trainers and Range Control. Therefore, units will schedule through Camp Grayling Range Officer **NLT 90 Days** prior to scheduled request for the facility. All other requests are subject to approval based upon what is left over from valid, timely requests. Reference the specific functional description for your weapon system in this section prior to scheduling.

 - b) Controlling unit will occupy and control this Range Complex from OP5. Call sign is "Range 40 Control". Controlling unit is normally the senior command utilizing the complex. **This will be established when scheduled!**

- c) Range 40 Control will initiate radio checks hourly **ON THE HALF HOUR** for all firing points. For instance, if the firing point is occupied at 0810hrs., the next radio check will be at 0830hrs, then 0930, 1030 etc., until the unit goes “COLD” /displaces, or otherwise leaves the Range 40 Complex. **Internal FM Range Frequency is 38.90 MHz.** For Ranges on the 40 Complex (41, 43, 45, and 50) Range Control will contact each range individually at the **TOP OF THE HOUR.**
- d) Using unit must report number of personnel trained to Range Control personnel when firing point is “Occupied” and is requesting to either move to new firing point or going “Cold” for the day. This is required even if the Firing Point isn’t going “Hot”.
- e) Noise Abatement Procedures: The following weapon systems are to cease fire 3 hours after sunset until sunrise the following day:
- a) All Artillery
 - b) 120mm Mortars (Exception: Illumination Rounds are allowed)
 - c) TOW, DRAGON and Recoilless rifle
 - d) Demolitions and EOD operations
- (i) These same weapons systems are subject to cease fire on the following officially designated holiday weekends from 1600 hours Friday until sunrise Monday for **FOURTH OF JULY**, and Tuesday for **MEMORIAL DAY and LABOR DAY.**
- (ii) The same systems are required to cease fire on the opening weekend of Trout Fishing Season from 3 hours after sunset on Friday until sunrise the following Monday. Michigan’s Trout opener is normally the last Saturday in April.
- (iii) All cease-fire times are published by Range Control.

5) CONFLICTS:

- a) Reference page 56 for MORTAR Conflicts list concerning the Range 40 Complex.
- b) The following listed FP’s are the only approved and established FP’s that will be used on the Range 40 complex. The OIC will ensure only proper firing positions are occupied and safety data sheets or safety T’s are on hand for each specific FP. Mortar FP’s are designated by 500 series numbers and are followed by a (M). Artillery FP’s are designated by 100 – 400 series numbers:

a. Firing Point Data

FP	Grid	Elevation in Meters	FP	Grid	Elevation in Meters
100	9120 7309	380.5	302	8826 6352	383.8
101	9180 7335	379.8	303	8772 6358	390.8
102	9106 7352	377.0	304	8784 6432	417.0
103	9228 7340	379.6	305	8682 6617	384.9
104	9352 7228	383.0	307	8950 6278	368.7
105	9679 7080	367.9	308	8993 6268	370.2
106	9692 7060	366.6	321	8641 6445	393.8

107	9525 7050	369.3	323	8678 6687	382.6
108	9691 7030	366.4	400	8617 6829	413.1
109	9474 7010	370.2	401	8611 6844	414.2
110	9670 6994	366.0	405	8660 6882	404.5
112	9578 7158	369.1	406	8600 6879	413.9
113	9479 7062	370.4	500M	9436 6676	382
114	9247 7338	381.7	501M	9441 6713	380
115	9642 6996	370.2	502M	9444 6730	383
117	9166 7360	377.3	503M	9443 6770	382
118	9144 7351	378.0	504M	9439 6786	380
119	9169 7321	380.2	505M	9436 6830	380
120	9085 7284	378.6	506M	9437 6865	382
121	9055 7275	378.1	507M	9000 6998	380
122	9414 7166	375.5	508M	8979 6980	375
123	9729 6783	361.5	509M	8866 6885	374
124	9693 6870	363.4	510M	8817 6817	377
125	9789 6909	362.3	511M	8805 6786	383
126	9782 6931	364.2	512M	8795 6758	384
127	9726 6992	365.7	513M	8787 6735	377
128	9605 7042	369.2	514M	8801 6716	380
200	9459 6547	383.9	515M	8822 6705	380
201	9470 6545	383.3	516M	8849 6668	380
202	9124 6269	367.7	517M	8862 6630	375
203	9428 6444	383.2	518M	8882 6590	379
204	9140 6439	376.1	519M	8908 6539	381
205	9443 6499	384.9	520M	8932 6504	380
206	9497 6475	380.7	521M	8994 6487	373
207	9580 6586	384.5	522M	9077 6492	371
208	9623 6641	384.4	523M	9137 6489	380
209	9619 6401	390.0	524M	9235 6509	396
210	9469 6413	383.1	525M	9274 6517	400
211	9488 6382	389.1	526M	9330 6525	402
212	9458 6451	382.6	527M	9394 6541	397
213	9422 6388	379.5	OP4M	8808 6703	393
214	9265 6387	390.7	OP5M	8838 6618	419
215	9517 6506	381.5	OP6M	8860 6570	408
221	9528 6688	390.8	C4	9082 7065	392
222	9567 6555	381.9			
300	8904 6259	367.1			
301	8890 6256	367.4			

b. Range 40 impact area grids data

IMPACT AREA				
FQ936 660	FQ936 694	FQ907 694	FQ898 678	FQ908 660
PHOSPHORUS AREA				
FQ930 665	FQ930 685	FQ905 685	FQ905 665	

ARTILLERY

- 1) **FUNCTION:** Artillery Firing Proficiency & Maneuver training
- 2) **AMMUNITION:**
 - 105mm, HE, IL, WP, SMK
 - 155mm, HE, IL, WP, SMK
- 3) **FIRING POINTS:** The Range 40 Artillery firing points are located virtually 360 degrees around the range complex. Note the following:
 - Units may only occupy a scheduled firing point, for live fire, dry fire or training.
 - Minimum Quadrant Elevation is 267mils.
 - **NOTE:** Tracked vehicles must stay **EAST** of the 86 North-south gridline. This is in the vicinity of the "Orchard", 400 series firing points are located on leased land.
- 4) **CONFLICTS:** Most 100 series firing points are "**COLD**" when the Air-to-Ground range is "**HOT**" see **Pg 59**. **NOTE:** Air-to-Ground is often "**HOT**" 7 days per week and is typically "**HOT**" Tuesdays through Saturday. Only, well coordinated scheduled "**BLOCKED**" times can be utilized for firing from these points.
- 5) **FIRING PROCEDURES:**
 - Units will have, and use the latest data for each firing point that is, and will be "**HOT**".
 - Operate through their organic battalion FDC or controlling higher Hqs. Battalion FDO will coordinate through Range 40 Control for all Range Safety functions on 38.90MHz.
 - a) Commo checks with Range 40 Control are initiated hourly **ON THE HALF HOUR**. For instance.....1130, 1230, 1330, 1430.....**NOT** on the hour. This keeps the net clear for Range 40 Control to complete their required hourly radio checks with Range Control Fire Desk, on the top of the hour.
 - b) All other functions that require communications between FPs and Range Control will be made at appropriate times.
 - c) Scheduling for specific firing point and OPs must be submitted, **NLT 90 days**, prior to requested firing. All other requests will be scheduled with what is left over from valid timely requests.
 - Laser locations are from OP4, OP5 and OP6 only. Schedule these locations as a firing point.
 - a) A valid safety card, signed by the Camp Grayling Range Officer, must be located with the system at all times during laser operations.
 - b) Laser initiating times from each location will be entered on a DA FORM 1594, Daily Staff Journal. Data to enter is the location, the operator, the unit, type laser, the target description and location, and whether the laser is ground, vehicle mounted or hand held.
 - Contact Camp Grayling Range Control for current firing points & locations.
 - Reference Camp Grayling Range Safety Regulation, (CG Reg 385-63) and Range 40 SOP for further guidance.

- Have a unit representative present for the required Daily Range Conference conducted at OP5 at 0800 daily. (While firing)
- Transmit a “Round Count” to Range 40 Control as your batteries go “COLD” from each firing point. Include amounts of rounds, types, a DODIC from each point when contact with Range 40 is initiated,
- DUDDAGE and/or Rounds out of Safe are to be reported immediately to Range Control, for investigation, and notification of EOD support. Reference Camp Grayling Range Safety Regulation (CG Reg 385-63) for further guidance.

MORTARS

- 1) FUNCTION: 32 Surveyed Firing Points for Mortar Proficiency Training
- 2) AMMUNITION: 60mm, 81mm, 120mm HE, IL, WP
 - **NOTE:** Of the 60mm mortar ammunition, **ONLY M888**, can be fired on FP 507 & 508 on Range 40. All other 60mm ammunition **MUST** be fired on Range 13.
- 3) Contact Camp Grayling Range Control for a listing of designated Mortar Firing Points. These points are listed as the “500” series.
- 4) Each Mortar Firing Point must go through Range 40 Control, FM Frequency 38.90 MHz, for all range functions.
- 5) Each firing point must be requested **NLT 90 Days** prior to scheduled training periods.
- 6) CONFLICTS: Due to the multi-use of this complex, conflicts can occur with scheduling mortar firing points and OPs. Coordination between all users **MUST** be determined prior to firing. Reference pages 56 & 57 Mortar conflicts on Range 40 Complex.
- 7) Mortar safety cards must be approved by the Camp Grayling Range Officer NLT 7 (seven) days prior to occupation.
 - Trainers must have all mortar safety cards (including Mortar Ballistic Computer Data Sheets) at each gun location.
 - Ensure that all heading data on the desired safety card is completed accurately. Any blanks or errors will result in denial of your requested firing point(s) and you will be unable to fire as planned.
 - Forward requested Firing Point Safety Cards to:

Range Officer
ATTN: NGMI-JHQ-CG-OPS, Building #545
Camp Grayling, MI 49739-0001
- 8) Firing point OIC/NCOIC can pick up their approved safety cards upon arrival at Camp Grayling for their AT or IDT training period.

**TOW MISSILE LIVE FIRE, FP C-4
(INERT WARHEADS ONLY)**

- 1) FUNCTION: TOW Missile (Air, vehicle, or dismounted - **INERT WARHEADS ONLY**), Mortar, Artillery Direct Fire, Dragon & Javelin Firing Point
- 2) LOCATION: FQ9083 7065
- 3) TARGETS: Hard targets are located from 1500 meters to 4000 meters downrange from the firing point.
- 4) RANGE SAFETY:
 - **LEFT:** 166⁰ degrees grid / 2933.4 mils
 - **RIGHT:** 178⁰ degrees grid / 3164.5 mils
 - **NOTE:** Targets in the AIR-TO-GROUND Range Complex, described as the area north of the east-west berm approximately 1300 meters to the south of this firing point, **WILL NOT BE ENGAGED!** This area contains targets for AIR-TO-GROUND use ONLY, **NOT** for TOW Missile, Dragon, Javelin & FA direct fire training.
- 5) CONFLICTS: Firing Point C-4 **WILL NOT** be “HOT” while AIR-TO-GROUND is “HOT”.
- 6) RESTRICTIONS:
 - “**INERT WARHEADS ONLY**” for TOW 1 & 2
 - **DO NOT ENGAGE** AIR-TO-GROUND Targets.
 - The TOW 2 family of missile is equipped with an infrared source for tracking by far infrared (FLIR) equipped ground launchers and C-NITE equipped AH-1 COBRA helicopter, but are susceptible to loss of tracking in smoke, fog, and other related obscurities. Therefore, **DO NOT FIRE** when smoke, fog, snow or other obscurants are obstructing the target, as they inhibit the tracking system and may result in erratic rounds.
 - Hard Targets vicinity Grid: (FQ 9089 6974 / FQ 9087 6970) are for TOW, Dragon, Javelin & FA Direct Fire Only.
- 7) TOW CALIBRATION: DS maintenance must have calibrated the day and night sight within 90 days prior to firing.
- 8) RANGE SWEEP: A visual range sweep from OP 5 must be completed prior to going “HOT”.
- 9) COMMUNICATIONS:
 - If Range 40 Control (OP 5) is occupied:
 - a) An internal FM control net for the Range 40 Complex is on 38.90MHz.
 - b) Range 40 Control is the controlling authority for this complex.
 - c) Communications checks will be initiated by the firing point OIC with Range 40 Control **HOURLY** on the **HALF HOUR**. For instance 0930, 1030, 1130.
 - d) Permission to “OCCUPY”, go “HOT”, etc, must be requested through Range 40 Control.

- If Range 40 Control is **NOT** occupied:
 - a) An FM control net is established on 41.80MHz with Range Control, Bldg 545, and Main Post.
 - b) The firing point OIC will make direct contact with Range Control for permission to “OCCUPY”, go “HOT” & “COLD”, commo checks and any other range safety items that need to be addressed.
 - c) Commo checks will be made on the **HOUR**. (Example: 1000, 1100, 1200).
- This frequency will be monitored **AT ALL TIMES**, regardless of internal unit frequencies.
- The call sign for this firing point is: FIRING POINT C-4.

HELICOPTER DOOR GUNNERY

- 1) **FUNCTION:** Practice and qualification for Helicopter Door Gunners
- 2) **Courses:** One (1)
- 3) **AMMUNITION:** 7.62 mm MG
- 4) **SAFETY LIMITS:** As designated by Camp Grayling Range Officer, and course description. Scarlet Streamer is to be displayed during daylight use, flashing red light during night use. Both are displayed from OP5, which is required to be manned during use.
- 5) **TARGETS:** Hard Targets (Busses, APC's) 55 Gallon Drums inside the fence around the Range 40 Impact Area.
- 6) **RANGE SWEEP:** Visual range sweep is required for use of Range 40, Door Gunnery Course; the sweep must be completed prior to going "HOT".
- 7) **COMPLEX ASSETS:** FAARPS, Hard Targets, Marked Firing points, Fence Impact Area, OP5 Control Tower.
- 8) **RESTRICTIONS:**
 - Altitude requirements established from Airfield Operations.
 - Training scenario must be coordinated through range control to determine and manage potential range conflicts.
- 9) **RANGE OPERATIONS:** OIC located at OP5 range tower with FM, telephone capability, and 800 MHz Radio to Range Control (41.80 MHz FM Radio, Zone A, Ch.9 CGRC 800 MHz).

RANGE 41

- 1) FUNCTION:
 - PRIMARY: Dragon, LAW, AT-4, MK-19 HE/TP, and Machinegun Familiarization ONLY
 - CEV
- 2) FIRING POSITIONS:
 - 4 ea. for AT-4 & LAW
 - 1 ea. for DRAGON
 - 2 ea. for CEV & MK-19
- 3) LOCATION: FQ917 650
 - Direction of fire: 10⁰
 - Left Lateral Limit: 2⁰
 - Right Lateral Limit: 25⁰
- 4) AMMUNITION: 106mm Recoilless Rifle, DRAGON (HE), Combat Engineer Vehicle (CEV) 165mm, 66mm HEAT, 84mm HEAT, 40mm HE/TP, 5.56mm & 7.62mm.
- 5) TARGETS: Hard Targets - 400 meters to 1300 meters.
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red light during night fire.
- 7) RESTRICTIONS:
 - **DRAGON GUNNERS AND TRAINERS AT LAUNCH POSITION SHALL WEAR PROTECTIVE VEST, EYE PROTECTION & HELMET.**
 - **BACKBLAST FOR AT-4, 84mm HEAT IS 100 METERS at 45 DEGREES LEFT AND RIGHT OF THE AZIMUTH OF FIRE. KEEP PERSONNEL AND EQUIPMENT CLEAR OF THIS AREA!!**
 - **DO NOT GO DOWN RANGE FOR ANY REASON. THIS IS A DUD IMPACT AREA!**
- 8) RANGE ASSETS:
 - OIC Tower
 - Porta-jons available upon request

RANGE 43

- 1) FUNCTION: Squad/Platoon Fire and Movement Range and Light/Heavy Demolition Range
- 2) LOCATION: FQ945 664
 - Direction of fire: 281⁰
 - Left Lateral Limit: 270⁰
 - Right Lateral Limit: 304⁰
- 3) WEAPONS & AMMUNITION:
 - M16A1/A2, SAW 5.56mm BALL
 - M60 MG, 7.62mm BALL
 - M203 Grenade, TP Only
 - AT-4, LAW, Sub-Cal Only
 - .50 Cal, M2 MG, SRTA **PLASTIC**
 - MORTARS, 60mm & 81mm
 - CLAYMORES
 - DEMO: Up to 40 lbs (Per Shot).
- 4) TARGETS: ROIC requests range targets and equipment from Range Control (Bldg #545). Stationary "E" type silhouettes on staves. (Range Control does not provide Staple guns, staples or tape).
- 5) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.
- 6) RESTRICTIONS: A written request and plan of operation must be submitted to Chief, Range Division **NLT 90 days** prior to use of this range facility. Plan a walk through with a range control representative for approval of the request. Additionally, mortar safety data must be requested and on hand prior to utilization.
- 7) DEMOLITION RESTRICTIONS: Only qualified demolitions instructors will be used for training personnel on this range. **Demolition reconnaissance (DA-2203-R) plan must be turned into range control for approval NLT 48 hours prior to occupation of this range.** Late plans, improper plans or not following your plan will result in loss of training time on this facility.
- 8) RANGE ASSETS: Porta-jons available upon request

RANGE 45

1) FUNCTION:

- PRIMARY: .50 cal Table II qualification, 7.62 & 5.56 Familiarization Only.

2) FIRING POSITIONS:

- 3ea. for .50 cal Qualification
- 2 per lane for .50 Cal, 7.62, 5.56 Familiarization

3) LOCATION: FQ 89455 69530

- Direction of fire: 131⁰
- Left Lateral Limit: 126⁰
- Right Lateral Limit: 137⁰

4) AMMUNITION: .50 Cal ball, 7.62mm ball, 5.56mm ball.

5) TARGETS: Pop-up targets- 400, 500, 600, 800, 1100, 1500 meters. (Range Control does not provide Staple guns, staples or tape).

6) RANGE SAFETY: Left and right lane markers and limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red lights during night fire.

7) RESTRICTIONS:

- **No vehicles on the firing line (Ground firing only).**
- **Must go to check fire when fast movers are present.**
- **DO NOT GO DOWN RANGE FOR ANY REASON. THIS IS A DUD IMPACT AREA!**

8) RANGE ASSETS: Porta-jons available upon request

MORTAR Conflicts (Range 13 & 40)

When using certain range/firing points you have to close other range/firing points. Those points identified in the “IN USE” Column below directly affect those in the “CLOSES” Column.

Note: there are four (4) Columns below Column 1 affects Column 2 and Column 3 affects Column 4.

RANGE 13		RANGE 40	
IN USE (1)	CLOSES (2)	IN USE (3)	CLOSES (4)
FP 13-01	FP 13-02	FP 513	FP 515
FP 13-02	FP 13-01	FP 515	FP 513
FP 13-03	OP-A	FP 514	FP 515
OP-A	FP 13-03	FP 515	FP 514
FP 13-04	FP 13-05	FP 515	OP-4
FP 13-05	FP 13-04	OP-4	FP 515
FP 13-06	FP 13-05	OP-5	FP 517
FP 13-07	FP 13-08	FP 517	OP-5
FP 13-08	FP 13-07	FP 518	OP-6
FP 13-10	OP-B OP-C	OP-6	FP 518
OP-B	FP 13-10 OP-C	FP's 500-506	RNG 43 RNG 44 RNG 45
OP-C	FP 13-10 OP-B	RNG 43	FP's 500-506
FP 13-A1	RNG 14	RNG 44	FP's 500-506
FP 13-A1	RNG 15	RNG 45	FP's 500-506
RNG 14	FP 13-A1	FP 523	RNG 41
RNG 15	FP 13-A1	RNG 41	FP 523
FP 13-A2	RNG 14		
FP 13-A2	RNG 15		
RNG 15	FP 13-A2		
RNG 15	FP 13-A2		
RNG 17	ALL Firing Points		
Any FP 13 Complex	RNG 17		
		A/G	DZ-Rat DZ-Steelgate FP 100 FP 101 FP 102 FP 103 FP 104

			FP 105 FP 106 FP 120 FP 121 FP 122 FP 128 FP-C4
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RANGE 50

- 1) FUNCTION:
 - Primary: 25 Meter Rifle, Hand Gun and Shotgun Zero/Qualification
 - Secondary: 10 Meter .50cal SRTA (PLASTIC) Zero/Familiarization
- 2) FIRING POINTS: 13.
 - Throughput: 26 Soldiers per hour
- 3) LOCATION: 919 711
 - Direction of Fire: 208⁰
 - Left Lateral Limit: 203⁰
 - Right Lateral Limit: 259⁰
- 4) WEAPONS & AMMUNITION: Rifles, Pistols & .50cal Machinegun (PLASTIC)
 - .45 cal, 9mm, .38 cal, .40 cal, .22 cal BALL, 5.56mm Ball & .50cal A062 SRTA (PLASTIC).
- 5) TARGETS: Staves and 3' x 5' 10 Meter MG zero / familiarization targets on site. (Range Control does not provide Staple guns, staples or tape).
- 6) RANGE SAFETY: Left and right limit markers. **NO CROSS LANE FIRING!** Scarlet streamers are to be displayed during daylight firing and flashing red light during night fire.
- 7) RESTRICTION:
 - Road Guard shall be posted to monitor traffic on road.
 - MOA required with Air-to-ground for range scheduling
 - Range shall notify Range Control on 41.80 & follow all standard range procedures when utilizing this range.
 - **NO** 7.62mm Firing
- 8) RANGE ASSETS:
 - Range Control Tower (Wooden Structure)
 - Target Shed (Wooden Structure)

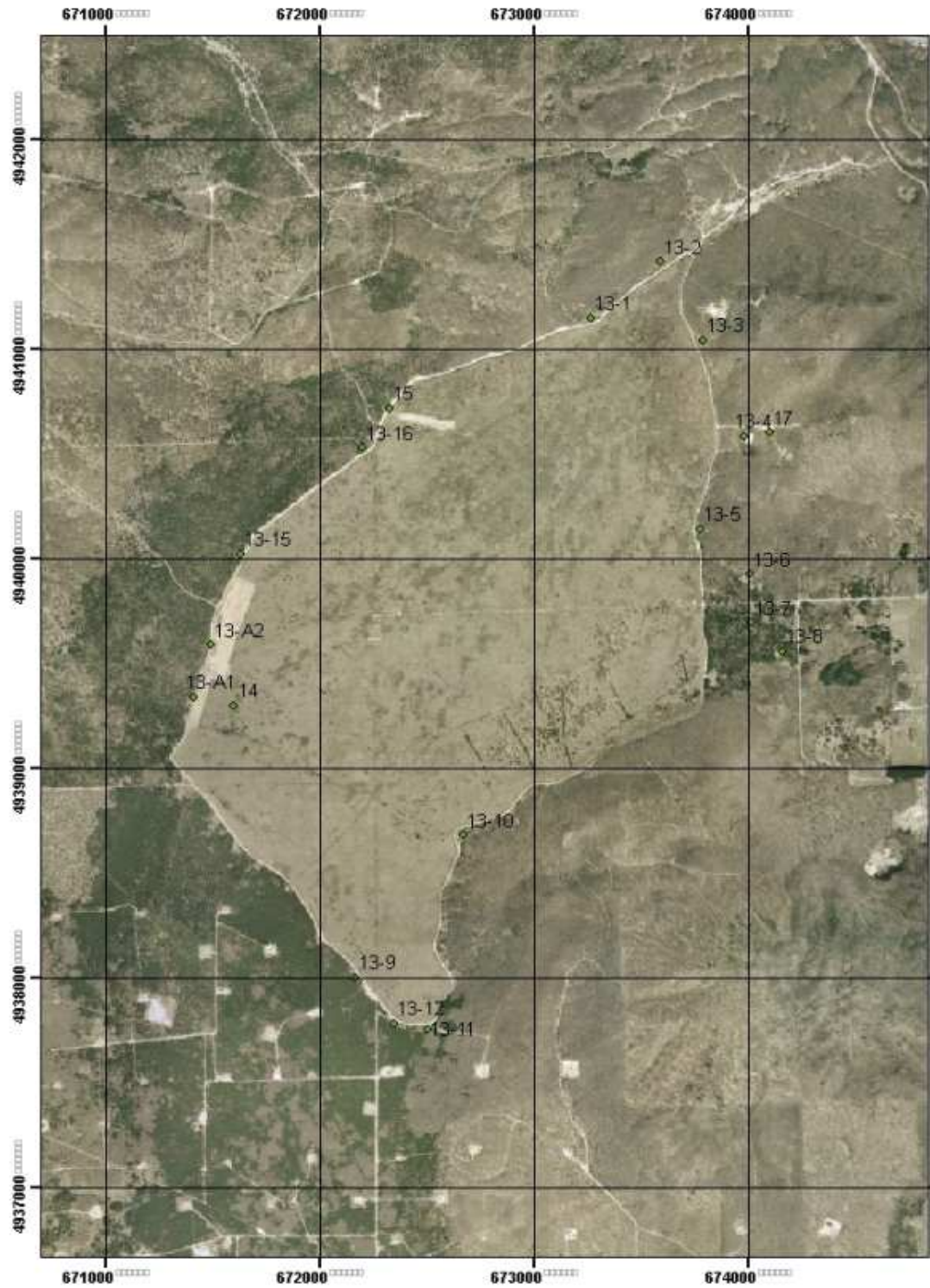
AIR-TO-GROUND

- 1) **FUNCTION:** Air Gunnery Range
- 2) **FIRING POINTS:** N/A
- 3) **LOCATION:** FQ 913708
 - Direction of Fire: 220⁰
- 4) **WEAPONS & AMMUNITION:**
 - F-16, A-10, AC-130 others as requested
 - 20mm 30mm 40mm BDU 33 BDU 50
 - GBU 10/12 MK 82
- 5) **TARGETS:** RANGE 40 ALPHA – JULIET target arrays; bomb circle, strafe pit, small arms range
- 6) **RANGE SAFETY:** Tower beacon on during night operations. Gate closed and sign posted for laser operations.
- 7) **GATES TO BE CLOSED AND LOCKED PRIOR TO LASER OPERATIONS AND LIVE DROPS.**
- 8) **RESTRICTION:** Clearance for aircraft to enter range shall be received from STEELGATE on 385.7. Personnel will report to range tower for clearance onto air gunnery range.
- 9) **RANGE ASSETS:**
 - Range Control Tower
 - Weapons Impact Scoring System
 - Smokey SAM Launcher

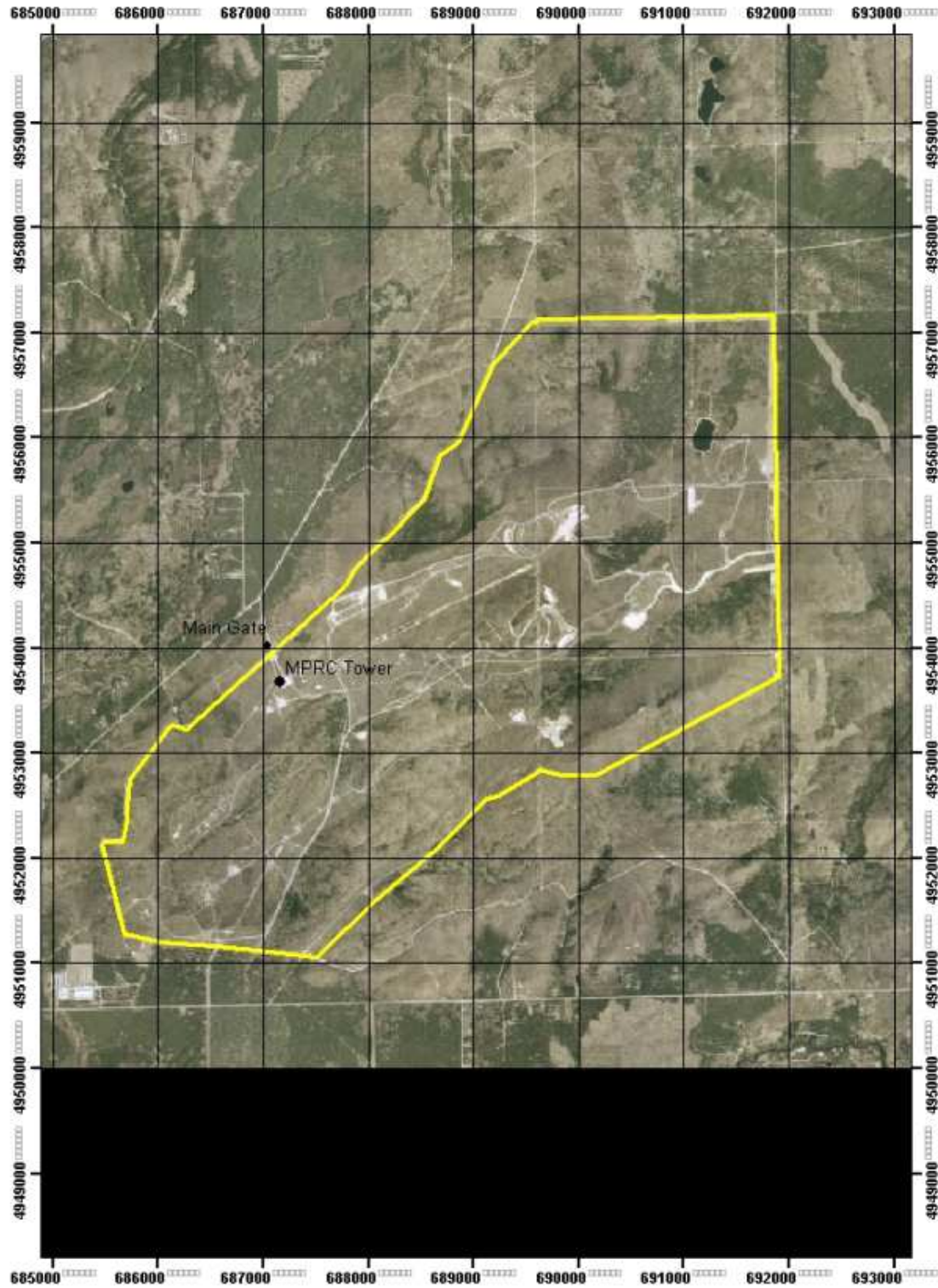
Small Arms Ranges



Range 13 Impact Area



30 COMPLEX AREA PHOTO



RANGE 40 COMPLEX AREA PHOTO

