



17833

## Combat Pistol Qualification Course (CPQC)



# RANGE DESIGN GUIDE



RANGE AND TRAINING LAND PROGRAM – MANDATORY CENTER OF EXPERTISE

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

HUNTSVILLE, ALABAMA

256-895-1534

[EMAIL RTLP](#)

## General

This document contains information specific to a Combat Pistol Qualification Course, FCC 17822 (CPQC). It describes the design and construction information that is specific to this range and refers to other sections of the RDG for general range information. Use both the specific information in this section and the general sections referenced together for a complete, useable range.

## Purpose

The CPQC meets soldiers training and qualification requirements with combat pistols and revolvers. This range is used to train and test soldiers on the skills necessary to identify, engage, and hit stationary infantry targets. All targets are fully automated, and the event specific target scenario is computer driven and scored. Note: Military Police Firearms (MPF) is no longer done on the CPQC, and those targets have been removed from the standard layout.

## Primary Feature

The primary features of the ranges are divided into two categories: the Range and the Range Operations and Control Area (ROCA).

## Range

The following drawings show the standard layouts. They are included at the end of this document.

- [PQC-C-01](#)
- [PQC-E-01](#)

## Layout

Use the standard CPQC layout referenced above as the basis for the range.

The standard has 15, 9M wide lanes, each with six targets. Targets are located between 10 and 31 meters from the firing line. The distance each target is from the firing line is standard and fixed, the left/right dispersion can be varied. The standard design lays out the targets to minimize the number of times shots through a target hit another target farther downrange. The layout also minimizes berm overlap. Each lane has a boot for placement of a magazine stand at the firing line and boots at 10M for group/zero exercise. There are walking trails that extend 8 meters downrange.

The table below provides the target count.

NUMBER	FEATURE	RDG SECTION
90	Narrow-Stationary Infantry Target	<a href="#">SIT</a>
15	Zero Target Frame	
2	Limit Markers	
15	Lane markers	

## Firing Line

The baseline is the start fire line for the CPQC. Provide a 1-Meter-wide gravel walk path that starts at the baseline and extends 8 Meters downrange. The path should be well drained with a maximum recommended slope of 2-3%. Provide a magazine stand at the baseline.

## Down Range

The range has 15 lanes, each 9 meters wide. The six targets are placed at 10, 12.5, 16.5, 23, 27, and 31 meters from the baseline. The targets can be moved left or right within the lane but must maintain the distance from the baseline. Use the Narrow SIT with most of the electrical equipment placed behind the baseline, refer to the electrical section for details.

## Line of Sight

Refer to the [Line of Sight](#) (LoS) section of the RDG for LoS requirements, procedures, and submittal requirements.

The range is lane-based, requiring line of sight along the firing path to each target within that lane. The limit markers also need to be visible from each firing position.

A downward Angle of Fire (AoF) from the walk-out path can expose the target lifter mechanisms to direct fire. Evaluate the AoF along each lane's walk-out path to each of its target emplacements. The walking path should be at least 18" below the top of the front wall of the targets. This provides an AoF of less than 10 degrees to all but the 10M and 12.5M targets. Coordinate with the installation and the user to see where along the path each target will be engaged. The walking path would need to be 48" below the top of the front wall of the 10M target to be able to engage it from the end of the walking path and keep the AoF below 10 degrees.

The control tower must have an unobstructed view of the entire firing line from the baseline to the zero targets.

## Targetry

The CPQC uses fully automated targets with event-specific, computer-driven target scenarios and scoring. The targetry computer in the Control Tower controls the targets through the target data network. The computer captures the scoring data, which is then available to the unit for after action review (AAR). The range is wired slightly differently from typical, refer to the Electrical Range Design Section of the RDG for further information.

## ROCA

Refer to the ROCA section of the RDG for general design information for each specific structure. Base the ROCA for the MPMG on the Small Arms ROCA.

The Control Tower must have an unrestricted view of the firing line. Range operators in the tower should be able to see most of the target area. Elevate the tower sufficiently so the view is not obstructed.

NAME	SIZE	UoM	RDG SECTION
Control Tower – Small Arms	1	EA	<a href="#">Control Towers</a>
Operations/Storage Building, Standard	800	SF	<a href="#">Operations and Storage Buildings</a>
Classroom Facility	800	SF	<a href="#">Classroom and AAR Facilities</a>
Latrine: Vault (Latrine: Water)	330 (550)	SF	<a href="#">Latrines</a>
Bleacher Enclosure	1	EA	<a href="#">Bleacher Enclosure</a>
Covered Mess	800	SF	<a href="#">Covered Mess</a>
Ammunition Breakdown Building	185	SF	<a href="#">Ammunition Breakdown Building</a>

## Requirement Documents

Refer to Training Circular TC 25-8, Training Ranges, for additional information and references to the FMs, ARTEPs, TCs, etc. that describe and require the training on this type of range. The latest TC 25-8 is available at Army Knowledge Online ([www.us.army.mil](http://www.us.army.mil)) and the General Dennis J. Reimer Training and Doctrine Digital Library ([www.train.army.mil](http://www.train.army.mil)).

## Additional Information

None





Designed by:	Date:	Rev.
Drawn by:	Check by:	Design file no.
Reviewed by:	Drawing code:	
Submitted by:	File name: Plot date: Plot scale:	

**U. S. ARMY ENGINEERING AND  
SUPPORT CENTER, HUNTSVILLE  
HUNTSVILLE, ALABAMA**

DECEMBER 2023

# RANGE AND TRAINING LAND PROGRAM STANDARD DESIGN MANUAL

**FCC- 17822**  
**COMBAT PISTOL QUALIFICATION COURSE**

**Sheet  
reference  
number:**

**PQC-C-01**



A diagram showing a single vertical pipe. A dashed circle is drawn around the base of the pipe, indicating a specific area of interest or a measurement point.

SIT (STATIONARY INFANTRY TARGET)

- BOOT (MAGAZINE STAND LOCATED AT CPQC FIRING LINE START)

●—● BOOT SET (ZERO TARGET STAND)

NOTES TO DESIGNER:

1. ORIENT TARGETS TO FACE THE CENTER OF THE TRAIL AT THE CPQC FIRING LINE FOR EACH LANE.
2. SUPPORT FACILITIES MUST BE SITE ADAPTED TO MEET LOCAL REQUIREMENTS
3. TARGET LOCATIONS WITHIN EACH LANE MAY BE MOVED LEFT OR RIGHT IF NECESSARY. DISTANCE FROM FIRING LINE IS FIXED.
4. WALKOUT TRAIL EXTENDS 8M PAST FIRING LINE. ADD WOOD RETAINING WALLS TO KEEP BERMS OFF OF WALKING TRAIL AS NECESSARY.

