17878
Urban Assault Course (UAC)

RANGE DESIGN GUIDE

RANGE AND TRAINING LAND PROGRAM – MANDATORY CENTER OF EXPERTISE
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General

This document contains information specific to an Urban Assault Course (UAC). The document includes references to sections of the RDG for information that is general to multiple range types. The document describes the design and construction information that is specific to the range and is not contained in, or differs from, the general section. Use both the specific information in this section and the general sections referenced together for a complete, useable range.

Purpose

The UAC consists of five (or six) separate stations designed for small unit training in urban operations. This range supports training of individuals, teams, squads, and/or platoons on individual and collective tasks associated with military operations in urban terrain (MOUT).

Primary Features

This section provides the standard layout and a listing of the primary features that are standard on a UAC; separated into Range and the Range Operations and Control Area (ROCA). The tables include the number and/or size of each item included in a standard facility with hyperlinks to the RDG section with the general design and construction requirements.

Standard Layout

The following drawings depict the standard layout for the range. They are included at the end of this document.

- UAC-C-01 - Urban Assault Course – Site Layout
- UAC-01 - Urban Assault Course – Station 1
- UAC-02 - Urban Assault Course – Station 2
- UAC-03 - Urban Assault Course – Station 3
- UAC-04 - Urban Assault Course – Station 4
- UAC-05 - Urban Assault Course – Station 5
- UAC-06 - Urban Assault Course – Station 6
- UAC-A-01 - Urban Assault Course – Facade Emplacement Details
- UAC-E-01 - Urban Assault Course – Sample Electrical Layout

<table>
<thead>
<tr>
<th>Number</th>
<th>Feature</th>
<th>RDG Section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stationary Infantry Target</td>
<td>SIT</td>
</tr>
<tr>
<td></td>
<td>Widened Stationary Infantry Target</td>
<td>WSIT</td>
</tr>
<tr>
<td></td>
<td>Range Signage</td>
<td>Range Signage</td>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>UoM</th>
<th>RDG Section</th>
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<tbody>
<tr>
<td>Operations/Storage Building, Standard</td>
<td>800</td>
<td>SF</td>
<td>Ops/Stg Buildings</td>
</tr>
<tr>
<td>Latrine: Vault (Latrine: Water)</td>
<td>330</td>
<td>SF</td>
<td>Latrines</td>
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</tbody>
</table>
Use the standard UAC layout at the end of this section as the basis for the range.

The standard UAC consist of five Stations; Station 6 is optional at those locations that have the training requirement for mine detection.

- Station 1 – Individual & Team Task – Technique
- Station 2 – Squad & Platoon Task – Technique
- Station 3 – Grenadier Gunnery
- Station 4 – Urban Offense/Defense Building
- Station 5 – Underground Trainer
- Station 6 – Explosive Hazard Detection Lane (Optional)

Station 1 supports basic individual and team urban training skills. It is a non-live fire facility. It is a three-room structure with windows, doors, and mouseholes to replicate various room entry configurations. It has no roof and an observation platform for trainers. CMU is the standard construction material. Coordinate with the installation to ensure that there are areas around this station to train maneuvering to the structure; include various cover types as necessary.

Station 2 supports basic urban training for larger elements, up to a platoon. It is a non-live fire facility. It consists of a number of one-story buildings on two sides of a center street with a two-story structure at the end. The structures do not have roofs. CMU is the normal construction material.

Station 3 supports grenadier gunnery using the dual purpose M203. It has an open area with targets and hasty firing positions with a two-story facade at end. The station supports small arms live fire and M203 training grenades (non-dud producing). The facade is normally wood construction with a flexible rubber membrane on the face. Design the facade so that it can withstand multiple impacts from the practice grenades with minimal damage and without causing ricochets from small arms firing. The station has a control shed at the baseline with a counter for the target control computer. In order to minimize wear on the facade, layout the firing positions and targets so that small arms shots at targets do not hit the facade.

Station 4 is a multi-story, multi-roomed, CMU, non-live fire structure designed to replicate a number of different building arrangements/scenarios. The facility has several room configurations/sizes, windows, doorways, loopholes, and mouseholes designed to replicate many different urban scenarios. Ensure that interior finishes support a non-water/weather tight structure. Include non-slip, sealed concrete floors that are sloped to drain. Seal CMU walls and floors against damage from rain and snow. Use sturdy construction methods to decrease maintenance requirements. As an option, where the training requirement exists, site the building so that it lines up with Station 3 to support sniper training.

Station 5 supports the training of basic underground tactics and procedures. Site the facility so that it drains well; typically above grade then covered with soil. Use concrete pipe and manholes. Include gates at entries to keep out animals. Attaching the underground trainer to the basement of Station 4 adds additional training scenarios and is an option. Include natural ventilation as
necessary. Adding mechanical ventilation increases cost and maintenance requirements, do not use unless required.

The optional Station 6 supports explosive hazard and mine detection training. It does not support explosives or mine clearing. The station is only included at those installations that have a mine-detecting mission. Select a well-drained site that requires minimal earthwork, keep soil disturbance to a minimum. Grub the entire footprint, clearing the soil of all roots, large rocks, and foreign materials to a depth of 2 feet. Remove metal and other foreign materials using the latest detection techniques. Recompact disturbed areas with native soils to match adjacent areas; the intent is to have uniform soils and compaction over the entire lane. Adjust the layout of the lanes and footprints to fit the site; keep the lane and footprint sizes and separations. Adjust the number of lanes depending on the training load. Keep concrete for the PVC corner pipes, if used, a minimum of 1 foot below grade. Coordinate with TCM Ranges and the RTLP-MCX for additional specific information.

**General Range Design Requirements**

In addition to the General Design Requirements, refer to the following discipline specific sections. Use these in addition to the sections for a specific item or structure and the design requirements in this document specific to the UAC.

**Civil Range Design**
- Range Siting Considerations
- Roads/Trails/Parking
- Target Protection Design Curves
- Line of sight
- Topographic Surveying

**Electrical Range Design**
- Data Termination Rack
- Downrange Power and Data Distribution – General
- Downrange Power and Data Distribution – UAC
- Target Feeder Voltage Drop Spreadsheet/Instructions

**ROCA**

Refer to the [ROCA-General](#) section of the RDG for general design information. The ROCA for the UAC is based on the standard Small Arms ROCA, though with fewer buildings.

**Firing Line**

The UAC does not have specific firing lines at each station.

**Line of sight**

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

Line of sight is required on Station 3 from each of each firing position to all of the target locations and to the facade.
Targetry

The UAC uses fully automated targets with event-specific, computer-driven target scenarios and scoring on Station 3. The targetry computer in the control shed controls the targets through the target data network. The target data network can be either hard-wired or Radio Frequency (RF), refer to the Downrange Power and Data – UAC Section of the RDG for further information. The computer captures the scoring data, which is then available to the unit for after action review (AAR).

Stations 1, 2, and 4 use Human Type Targets (HTT) that do not require computer control. Stations 5 and 6 do not have automated targetry.

Requirement Documents

Refer to Training Circular TC 25-8, Training Ranges, and TC 90-1, Urban Operations, 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) and the General Dennis J. Reimer Training and Doctrine Digital Library (www.train.army.mil).

Additional Information

None
NOTES:
1. ADJUST LAYOUT AS NECESSARY BASED ON SITE.
2. COVER IS IDENTIFIED AS TREES, BRUSH OR OTHER FORMS OF VEGETATION THAT COVER THE AREAS INDICATED.
3. PROVIDE BERM OF ADEQUATE HEIGHT AND LENGTH TO PROTECT PERSONNEL IN ADJACENT ACTIVITIES.
4. ONLY TRAINING ROUNDS WILL BE USED ON THE GRENADE GUNNERY STATION.