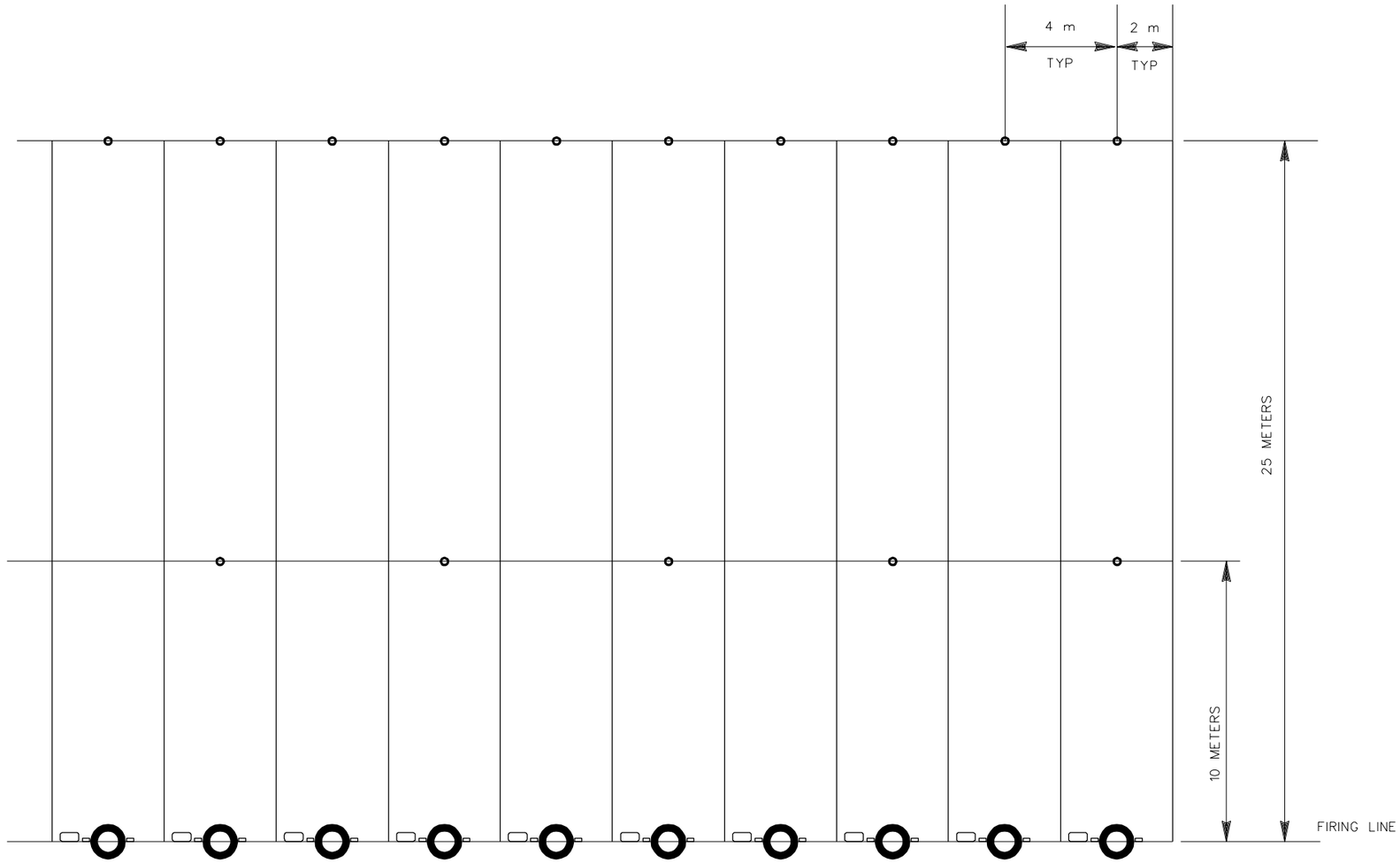


LEGEND

- FOXHOLE FIRING POINT
- V-NOTCH RIFLE RESTING PEG
- SANDBAGS
- TARGET BOOT

NOTES:

10 LANES SHOWN OF 32 LANE RANGE

FIRING POINT AND TARGET ARE ON A FLAT PLANE +/- 1°

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

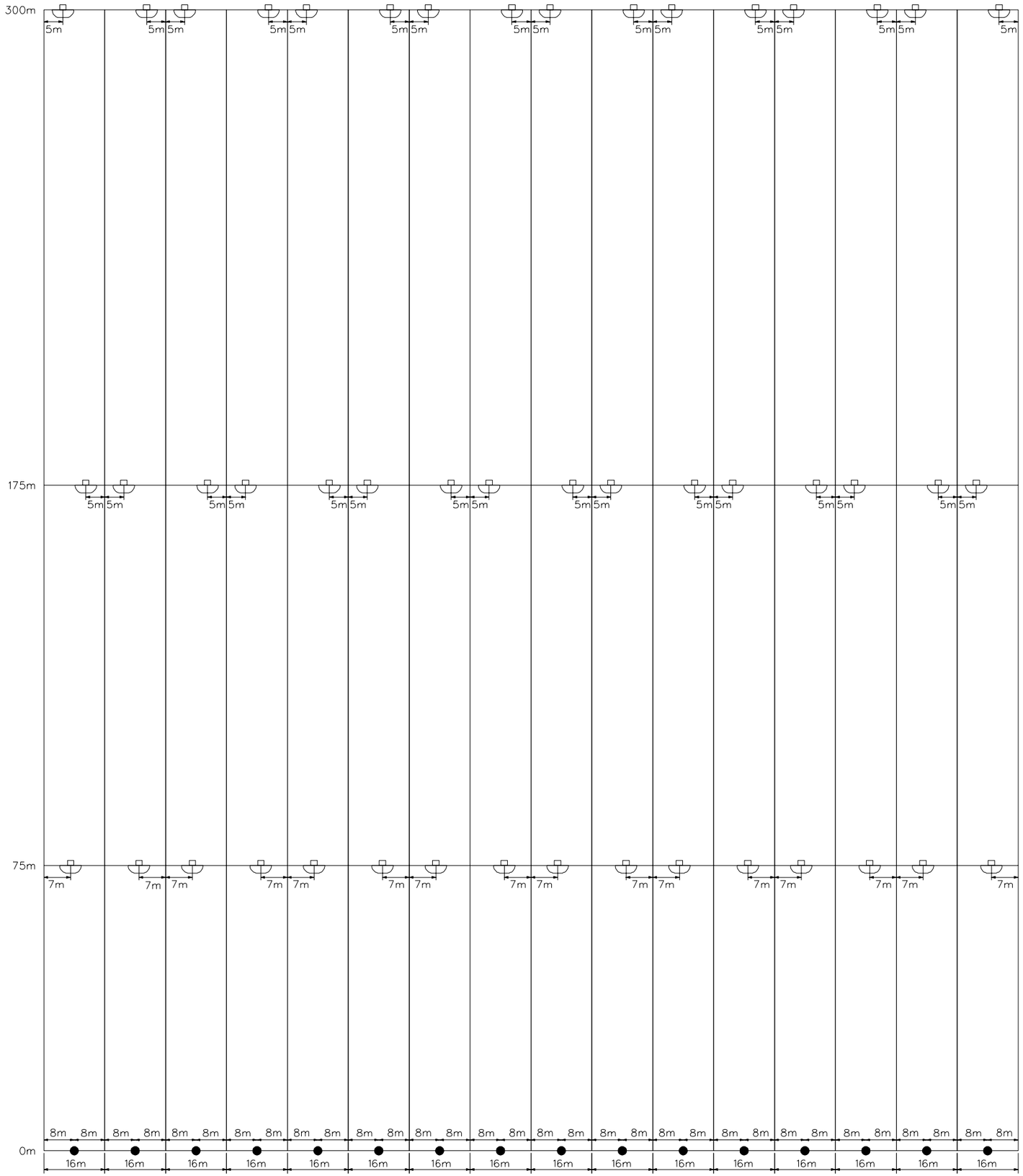
Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17801
25 M ZERO RANGE

Sheet reference number:
25Z-1
Sheet of



LEGEND

STATIONARY INFANTRY TARGET EMPLACEMENT

● FOXHOLE

NOTE:

16 LANES OF A 32 LANE RANGE SHOWN

US Army Corps of Engineers

Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

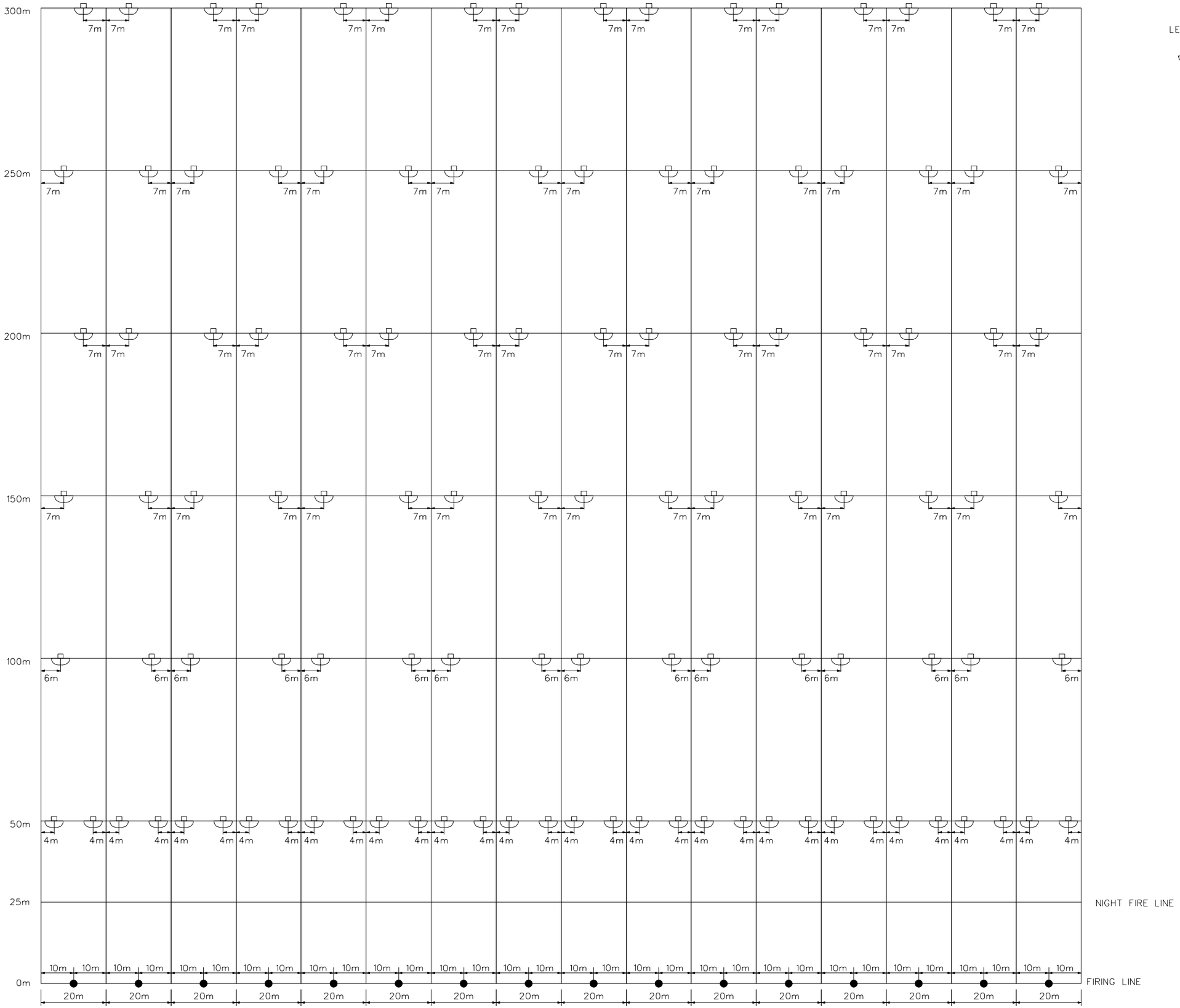
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17803
AUTOMATED FIELD FIRE RANGE

Sheet reference number:
AFF-1

Sheet of



LEGEND

STATIONARY INFANTRY TARGET EMPLACEMENT

FOXHOLE

US Army Corps of Engineers

Rev.	Description	Date	Approved

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

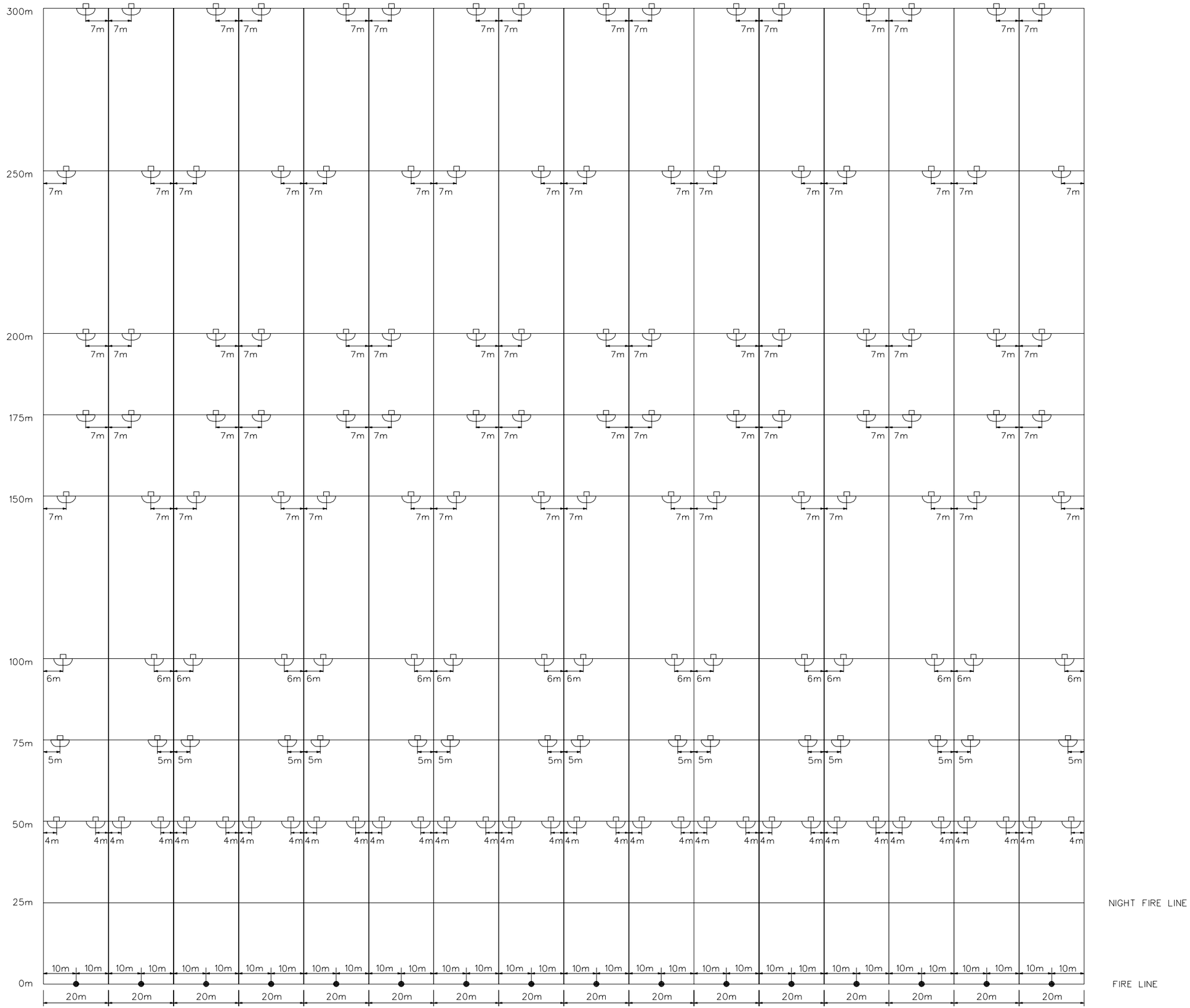
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17805
AUTOMATED RECORD FIRE RANGE

Sheet reference number:
ARF - 1

Sheet of



LEGEND

STATIONARY INFANTRY TARGET EMPLACEMENT

● FOXHOLE

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

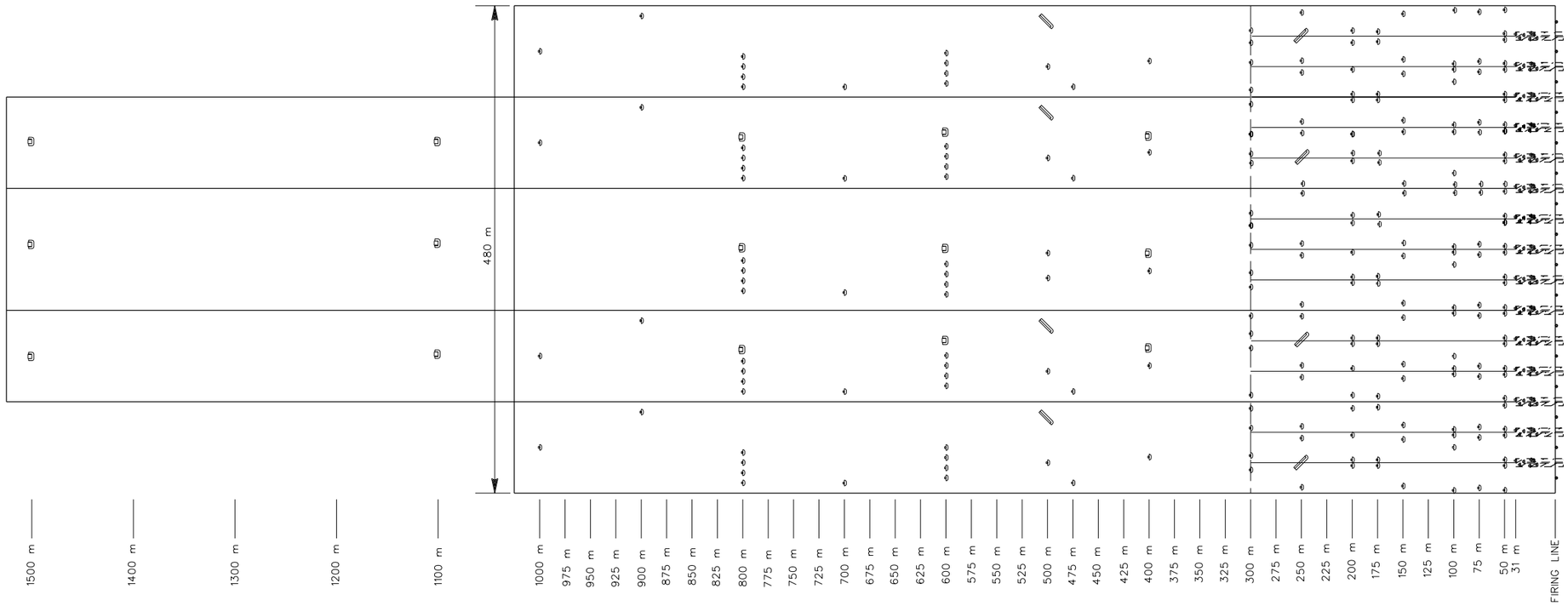
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17806
MODIFIED RECORD FIRE RANGE

Sheet reference number:
MRF - 1
Sheet of



NOTE:

FOR MPMG TARGETS SEE FCC 17833 DETAILS

LEGEND:

- SIT (STATIONARY INFANTRY TARGET)
- MIT (MOVING INFANTRY TARGET)
- FOXHOLE
- SAT (STATIONARY ARMOR TARGET)
- SINGLE LANE OF A COMBAT PISTOL QUALIFICATION COURSE SEE FCC 17822 FOR LAYOUT INFORMATION

US Army Corps of Engineers

Rev. *	Description	Date	Approved

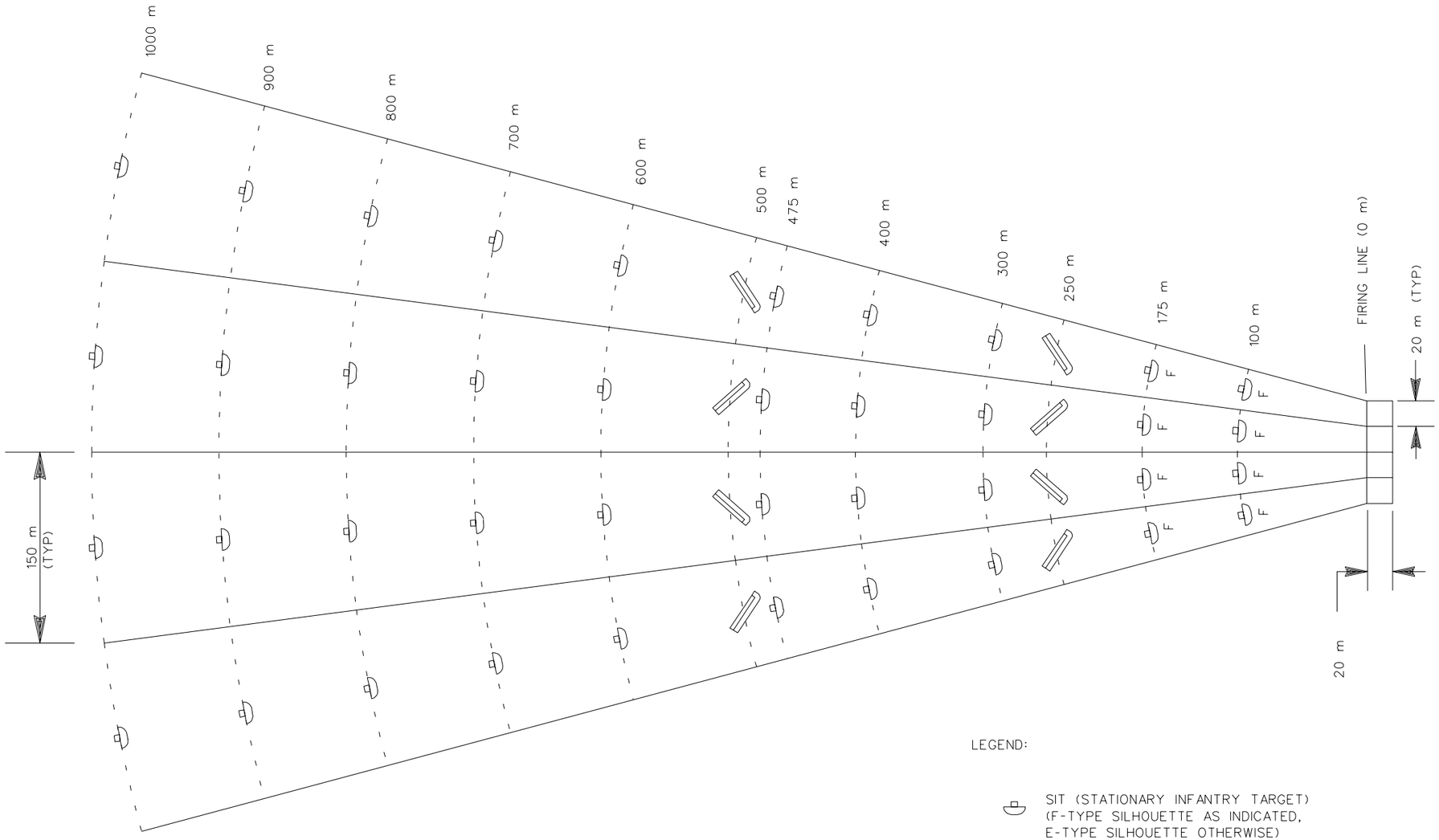
Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.:
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17809
QUALIFICATION TRAINING RANGE

Sheet reference number:
QTR-1
Sheet of



US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

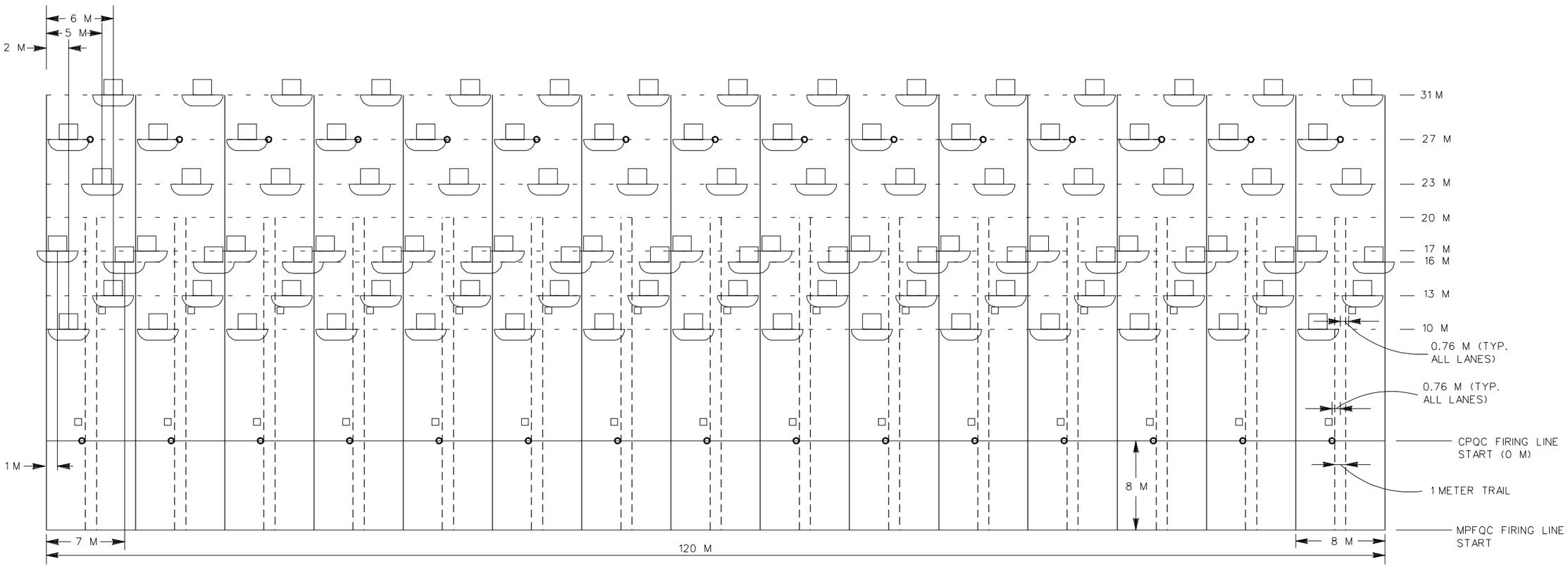
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot scale: Plot date:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17812
SNIPER FIELD FIRE RANGE

Sheet reference number:
SFF-1
Sheet of



NOTES:

1. TARGET LAYOUTS IN EACH LANE ARE IDENTICAL.
2. SUPPORT FACILITIES MUST BE SITE ADAPTED TO MEET LOCAL REQUIREMENTS.
3. THE MILITARY POLICE FIREARMS QUALIFICATION COURSE IS SHOWN OVERLAYED ON THE COMBAT PISTOL QUALIFICATION COURSE.

LEGEND

SIT (STATIONARY INFANTRY TARGET)

PORTABLE BARRICADE (0.61M WIDE X 1.98M HIGH AT 10M FROM MPFQC FIRING LINE START; 0.61M WIDE X 0.76M HIGH AT 20M FROM MPFQC FIRING LINE START)

BOOT (HOLDING BOOT FOR MAGAZINE TABLE STAND LOCATED AT CPQC FIRING LINE START; TARGET BOOT FOR MPFQC LOCATED 35M FROM MPFQC FIRING LINE START)

US Army Corps of Engineers

Rev #	Description	Date	Approved

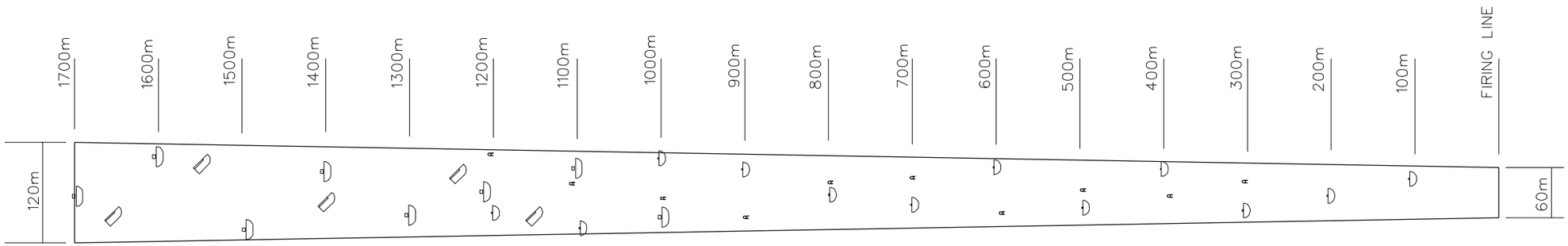
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC# 17822
COMBAT PISTOL - MILITARY POLICE QUALIFICATION COURSE

Sheet reference number:
PQC-1
Sheet of



LEGEND

- MOVING INFANTRY TARGET (MIT)
- IRON MAIDEN
- STATIONARY INFANTRY TARGET (SIT)
- STATIONARY ARMOR TARGET (SAT) WITH MATERIAL POP-UPS

US Army Corps of Engineers

Rev.	Description	Date	Approved

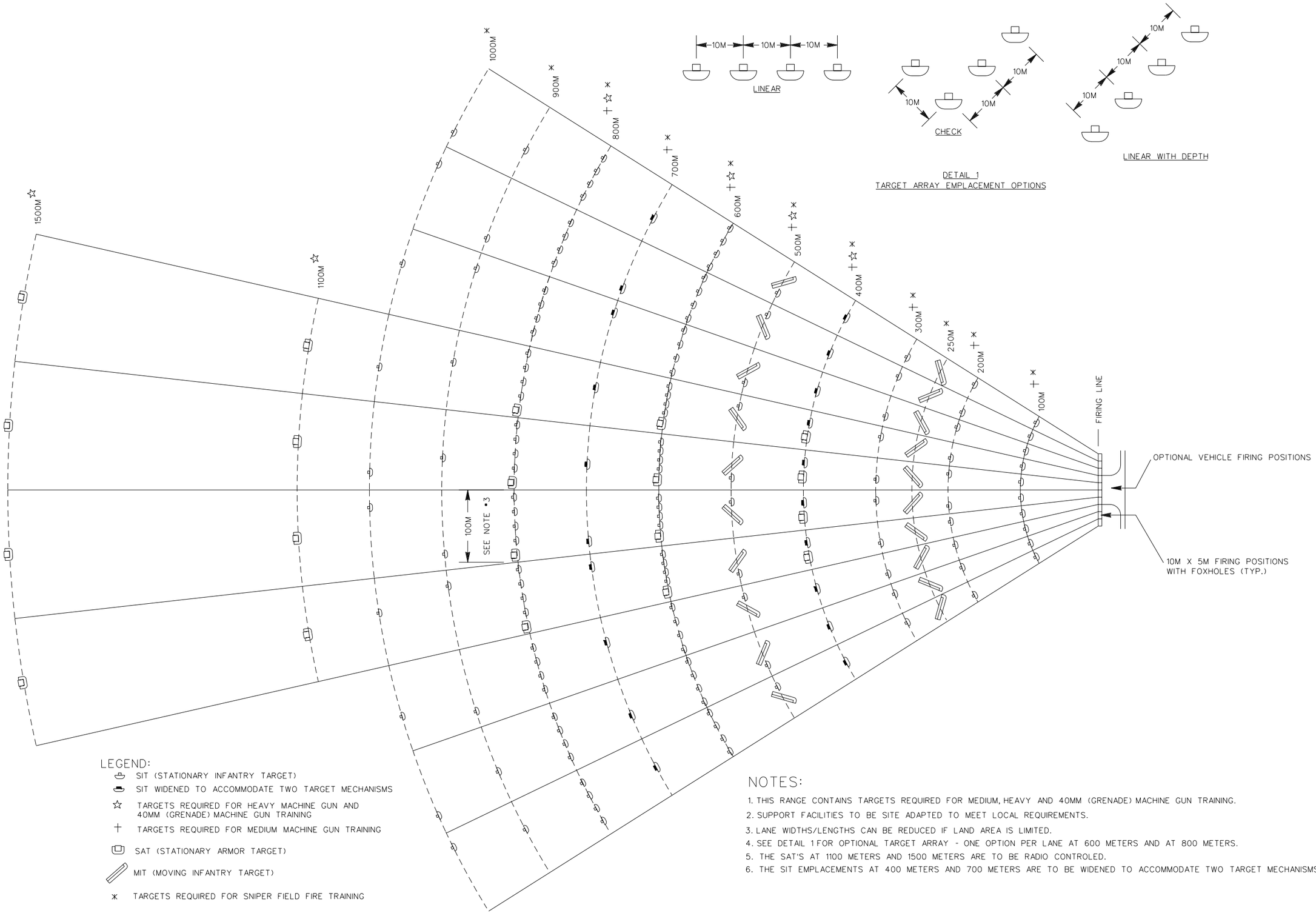
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: | Plot date: | Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17829
HEAVY SNIPER RANGE

Sheet reference number:
HVS-1
Sheet of



LEGEND:

- SIT (STATIONARY INFANTRY TARGET)
- SIT WIDENED TO ACCOMMODATE TWO TARGET MECHANISMS
- ☆ TARGETS REQUIRED FOR HEAVY MACHINE GUN AND 40MM (GRENADE) MACHINE GUN TRAINING
- + TARGETS REQUIRED FOR MEDIUM MACHINE GUN TRAINING
- SAT (STATIONARY ARMOR TARGET)
- MIT (MOVING INFANTRY TARGET)
- * TARGETS REQUIRED FOR SNIPER FIELD FIRE TRAINING

NOTES:

1. THIS RANGE CONTAINS TARGETS REQUIRED FOR MEDIUM, HEAVY AND 40MM (GRENADE) MACHINE GUN TRAINING.
2. SUPPORT FACILITIES TO BE SITE ADAPTED TO MEET LOCAL REQUIREMENTS.
3. LANE WIDTHS/LENGTHS CAN BE REDUCED IF LAND AREA IS LIMITED.
4. SEE DETAIL 1 FOR OPTIONAL TARGET ARRAY - ONE OPTION PER LANE AT 600 METERS AND AT 800 METERS.
5. THE SAT'S AT 1100 METERS AND 1500 METERS ARE TO BE RADIO CONTROLED.
6. THE SIT EMPLACEMENTS AT 400 METERS AND 700 METERS ARE TO BE WIDENED TO ACCOMMODATE TWO TARGET MECHANISMS.

US Army Corps of Engineers

Rev. *	Description	Date	Approved

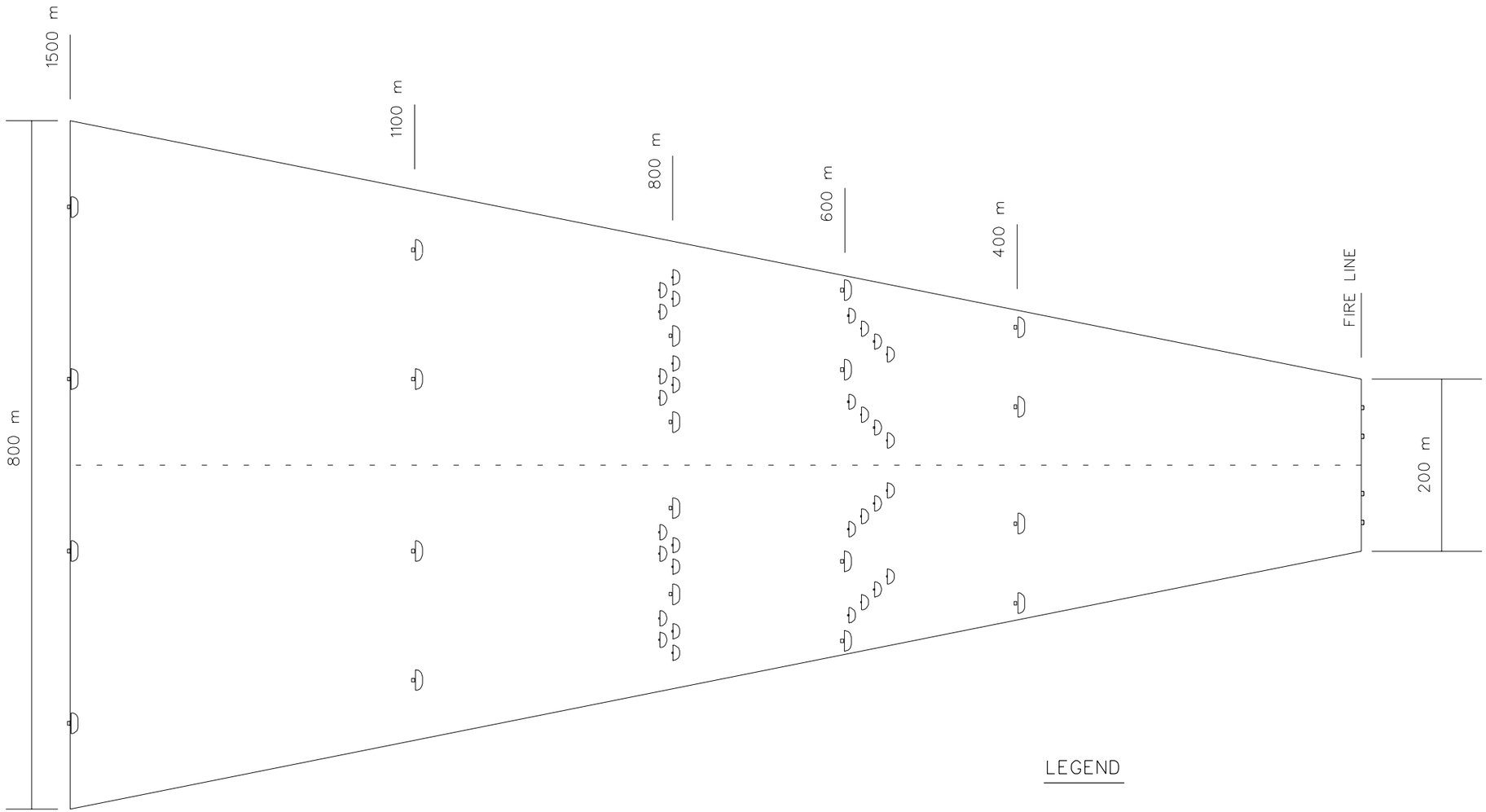
Designed by: | Date: | Rev.:
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17833
MULTIPURPOSE MACHINEGUN TRANSITION RANGE

Sheet reference number:
MGR-1
Sheet of



LEGEND

STATIONARY INFANTRY TARGET (SIT) EMPLACEMENT

STATIONARY ARMOR TARGET (SAT) EMPLACEMENT

FIRING POSITION

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

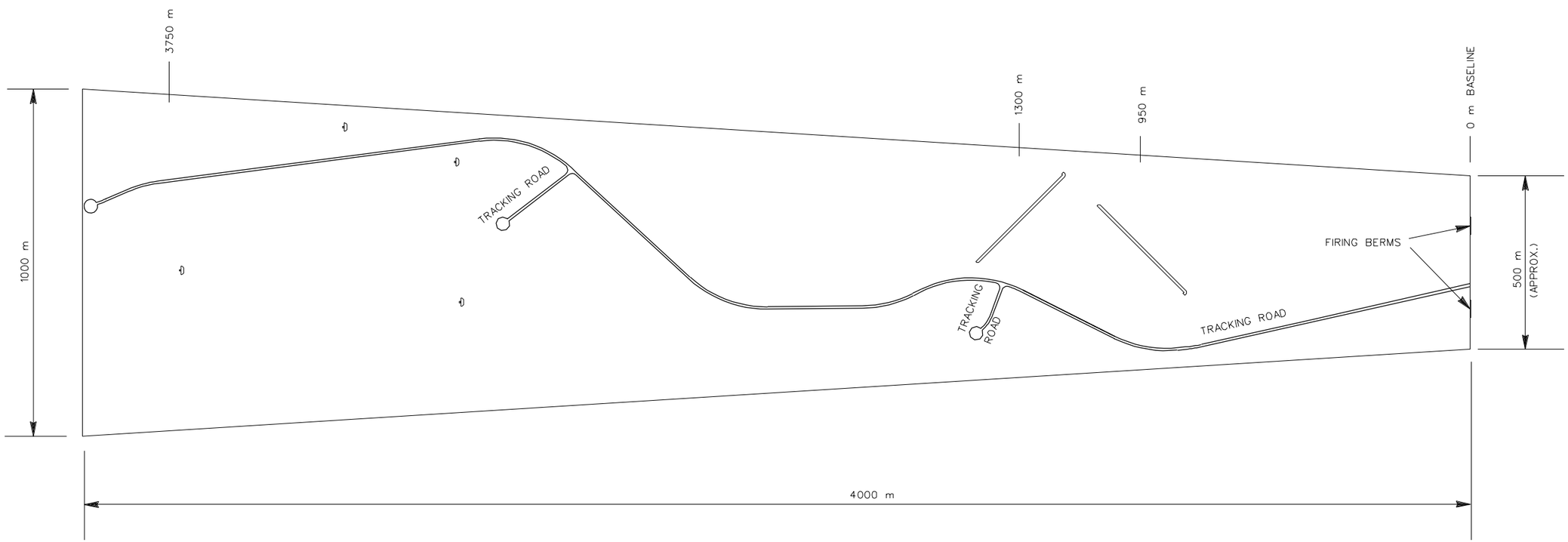
Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17834
40mm (GRENADE) MACHINE GUN QUALIFICATION RANGE

Sheet reference number:
M19-1
Sheet of



NOTES:

1. ALL AMTC AND SAT EMPLACEMENTS ARE DESIGNED FOR TANK AND BFV GUNNERY ONLY.
2. MOVING ARMOR TARGET EMPLACEMENTS ARE 350 METERS LONG.
3. SUPPORT FACILITIES TO BE SITED AT LOCATIONS SUITABLE TO RANGE OPERATIONS.
4. LOCATION OF THE BORESIGHT MUST BE COORDINATED WITH THE TRAINER.
5. GUNNERY TASKS REQUIRING THE USAGE OF DUD-PRODUCING AMMUNITION CANNOT BE FIRED ON THE RANGE PROPER. PROVISIONS FOR THESE TASKS MUST BE MADE IN IMPACT AREAS ADJACENT TO RANGE.

LEGEND

STATIONARY ARMOR TARGET (SAT) EMPLACEMENT

MOVING ARMOR TARGET (MAT) EMPLACEMENT

TURNAROUND

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

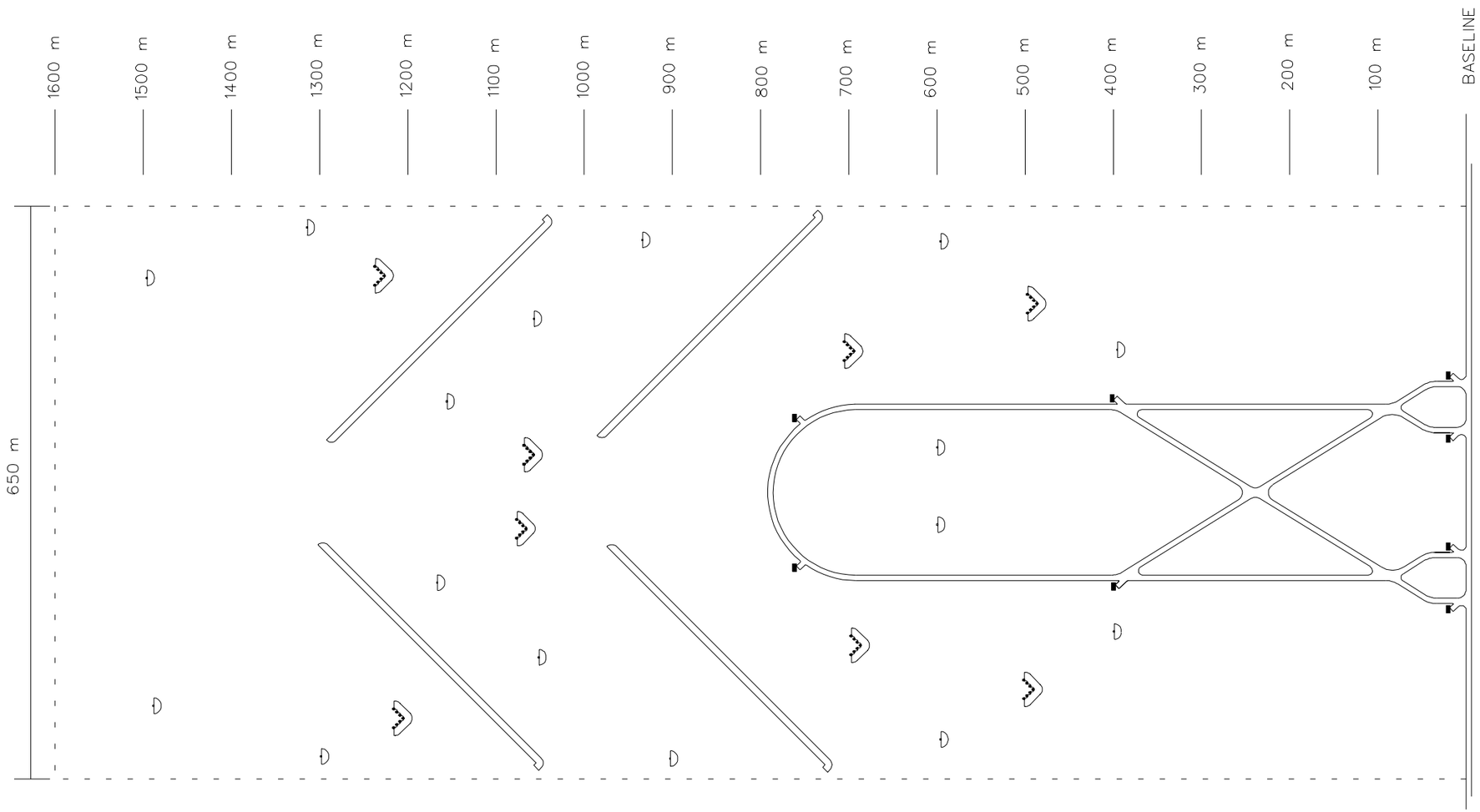
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17845
ANTIARMOR TRACKING & LIVE FIRE RANGE

Sheet reference number:
AAT-1
Sheet of



LEGEND

MONING ARMOR TARGET (MAT)

MODIFIED MIN. HULLDOWN (ENLARGED)

STATIONARY INFANTRY TARGET (SIT) CLUSTER EMPLACEMENT

STATIONARY ARMOR TARGET (SAT) EMPLACEMENT

US Army Corps of Engineers

Rev.	Date	Approved	Description
*			

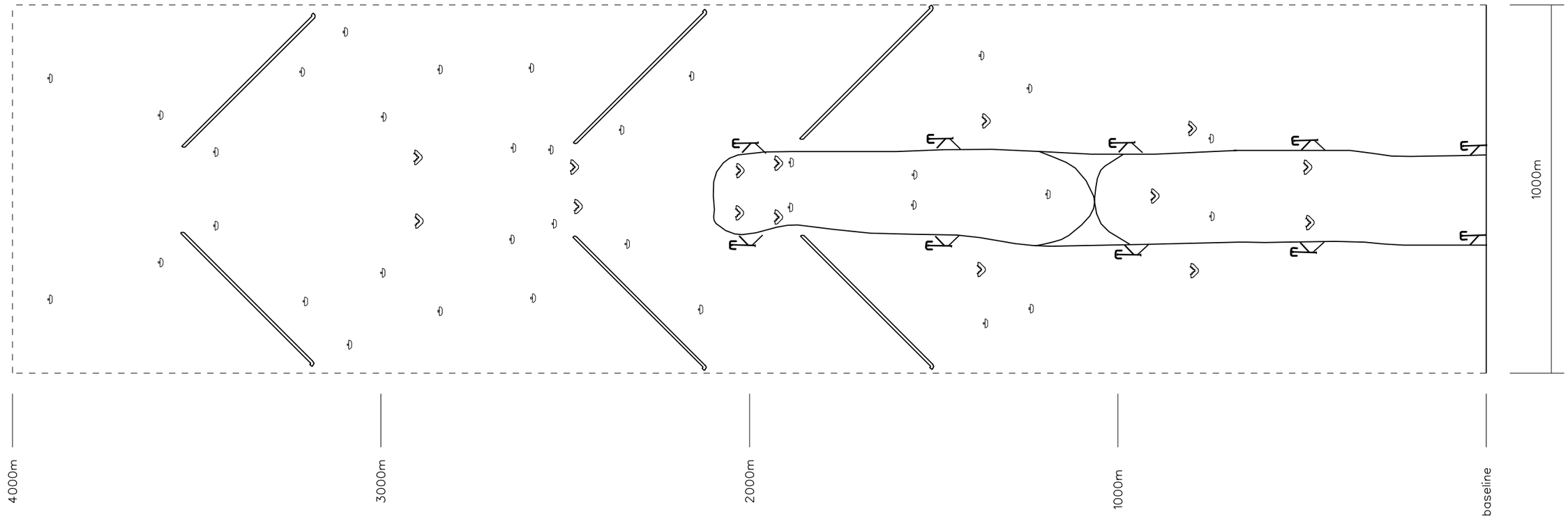
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

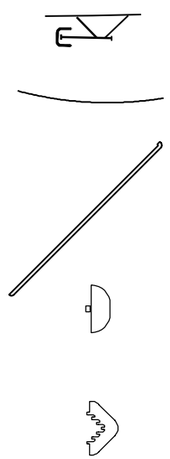
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17858
SCOUT RANGE

Sheet reference number:
SCT-1
Sheet of



LEGEND



DEFILADE POSITION

TRAIL

MOVING ARMOR TARGET (MAT) EMPLACEMENT

STATIONARY ARMOR TARGET (SAT) EMPLACEMENT

STATIONARY INFANTRY TARGET (SIT) EMPLACMENT CLUSTER

US Army Corps of Engineers

Rev. *	Description	Date	Approved

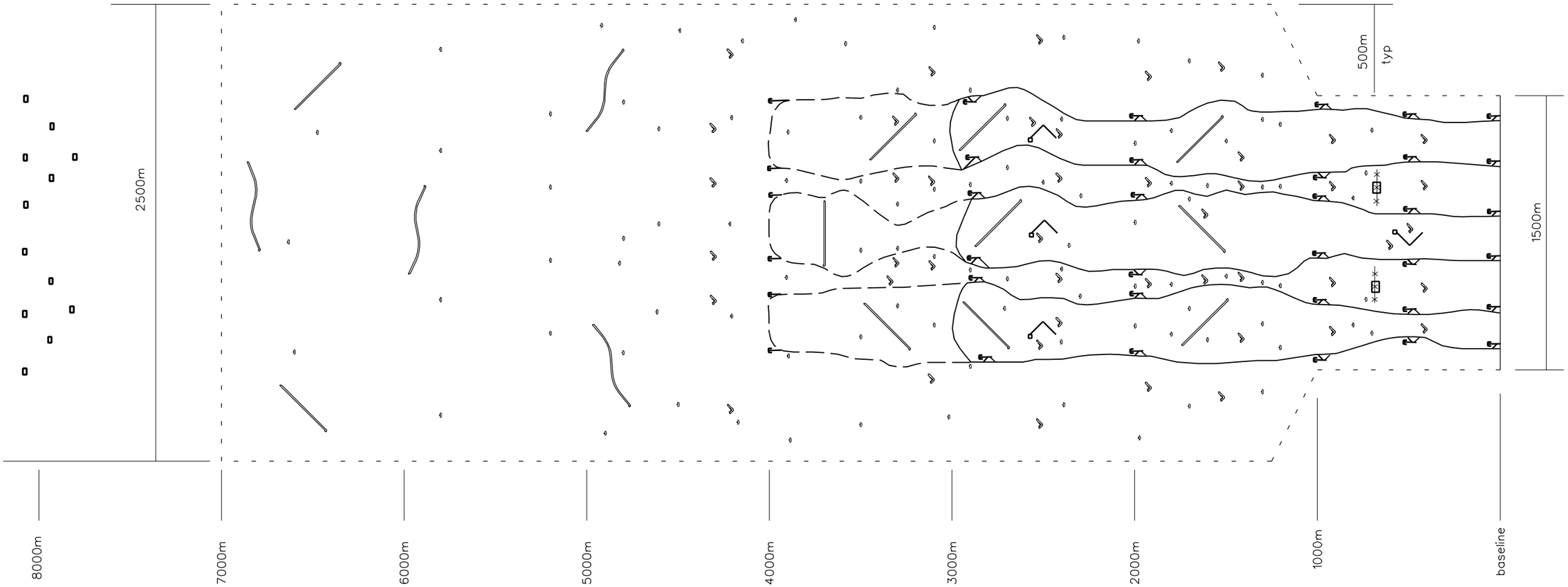
Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17859
DIGITAL MULTIPURPOSE TRAINING RANGE

Sheet reference number:
DMT-1
Sheet of



LEGEND

MOVING ARMOR TARGET (MAT) EMPLACEMENT

STATIONARY ARMOR TARGET (SAT) EMPLACEMENT

INFANTRY TARGET EMPLACMENT CLUSTER (7 SIT'S and 1 MIT)

TRAIL

DEFILADE POSITION

OPTIONAL TRAILS

STATIC TARGET

TRENCH WITH BUNKER

BREACHING OBSTACLE

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

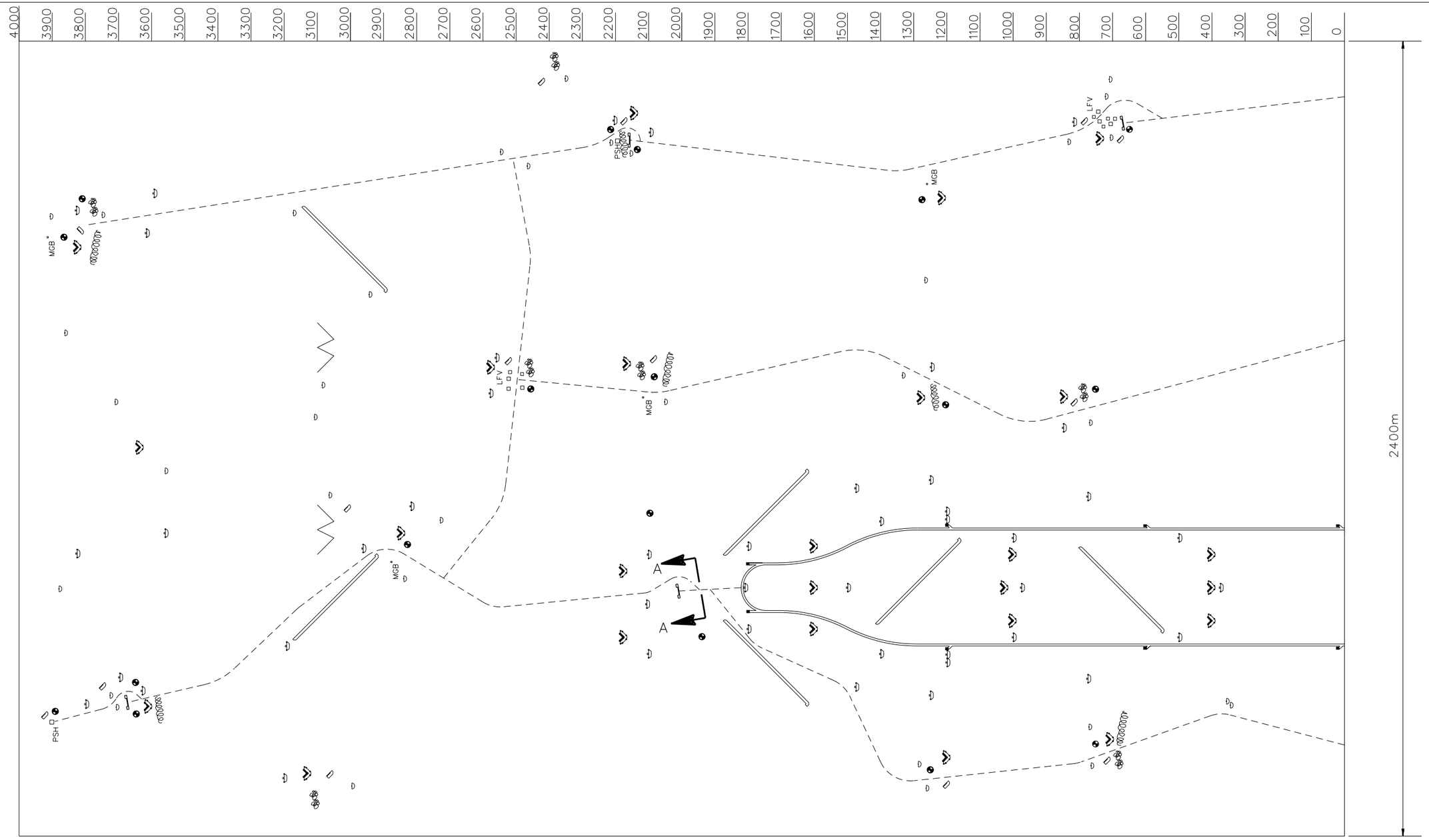
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17860
DIGITAL MULTIPURPOSE RANGE COMPLEX

Sheet reference number:
DMC-1
Sheet of



ELEVATION A-A

LEGEND

- MORTAR SIMULATION DEVICE EMPLACEMENT
- STATIONARY ARMOR TARGET (SAT) EMPLACEMENT
- INFANTRY MOVING TARGET (IMT) EMPLACEMENT
- CONCERTINA WIRE
- TRENCH
- STATIONARY INFANTRY TARGET (SIT) EMPLACEMENT
- STATIONARY INFANTRY TARGET (SIT) CLUSTER EMPLACEMENT
- MGB MACHINEGUN BUNKER
- PSH PORTABLE SHOOT HOUSE
- LFV LIVE FIRE VILLAGE
- BREACH WALL / BUILDING FACADE WITH SAT LIFTER
- BUILDING RUBBLE
- MOVING ARMOR TARGET (MAT) EMPLACEMENT
- MODIFIED MIN. HULLDOWN (ENLARGED)
- QUALIFICATION TRAIL
- SERVICE ROAD/TACTICAL TRAIL

US Army Corps of Engineers

Rev. *	Description	Date	Approved

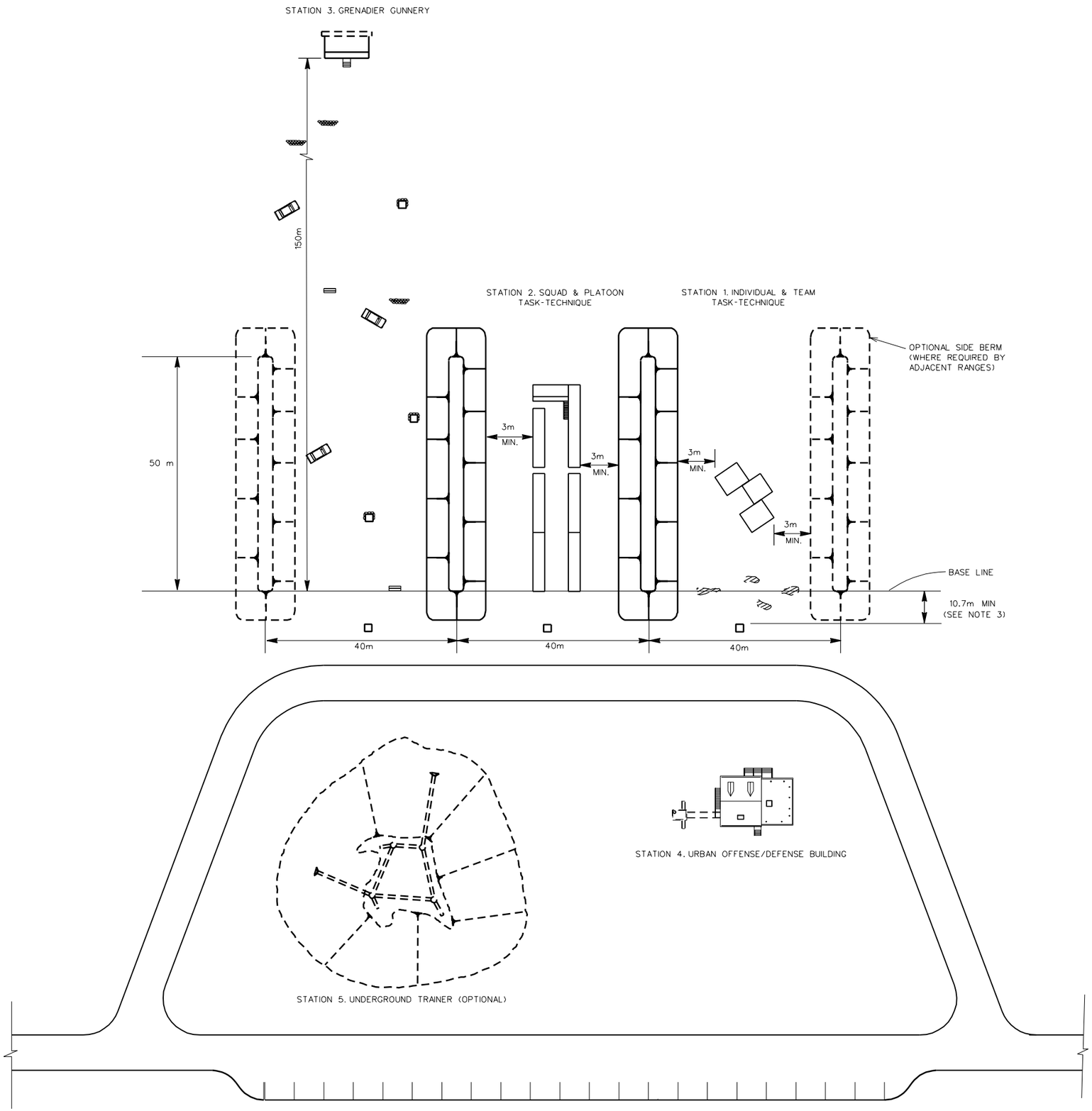
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev:
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

BATTLE AREA COURSE

Sheet reference number:
BAX-1
Sheet of



LEGEND:

- OBSERVATION PLATFORM
- COVER (SEE NOTE 2)
- RUBBLE
- BERM
- JUNK VEHICLE
- HASTY POSITION
- SHORT WALL
- SANDBAG/SOIL TARGET BERM
- TARGET OUTLET (T.O.)

NOTES:

1. SEE LEGEND FOR IDENTIFICATION OF COVER, FIRING POSITIONS, AND OTHER FEATURES.
2. COVER IS IDENTIFIED AS TREES, BRUSH OR OTHER FORMS OF VEGETATION THAT COVER THE AREAS INDICATED.
3. OBSERVATION PLATFORMS MUST BE SITED A MINIMUM OF 10.7 METERS FROM THE BASE LINE.
4. PROVIDE BERMS OF ADEQUATE HEIGHT AND LENGTH TO PROTECT PERSONNEL IN ADJACENT ACTIVITIES.
5. ONLY TRAINING ROUNDS WILL BE USED ON THE GRENADIER GUNNERY STATION.
6. TARGET OUTLETS PER STATION

STATION 1	0 SINGLE	6 DOUBLE
STATION 2	10 SINGLE	12 DOUBLE
STATION 3	2 SINGLE	5 DOUBLE
STATION 4	40 SINGLE	
STATION 5	NONE	

US Army Corps of Engineers

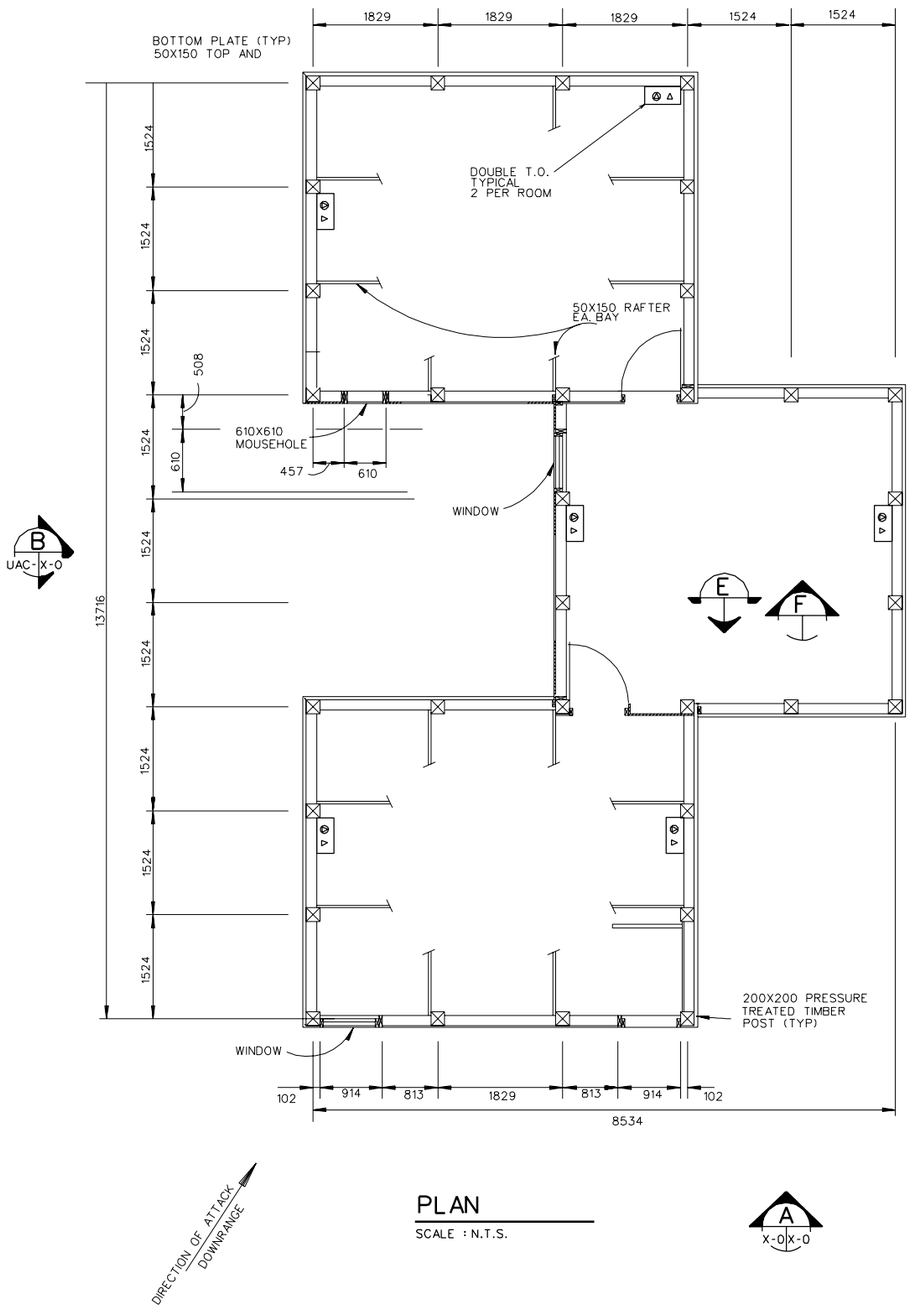
Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | File name: | Plot date: | Plot scale:
Submitted by:

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

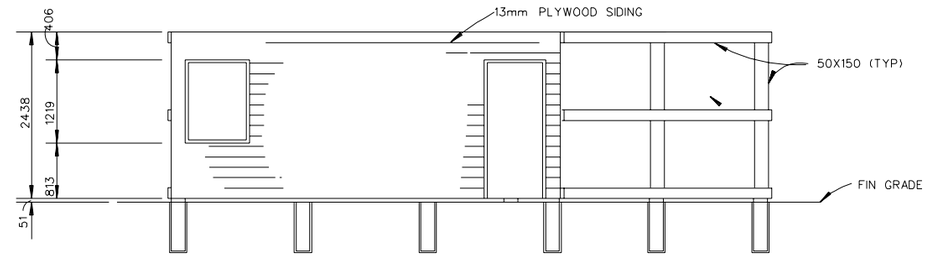
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
URBAN ASSAULT COURSE
SITE LAYOUT

Sheet reference number:
UAC- 1



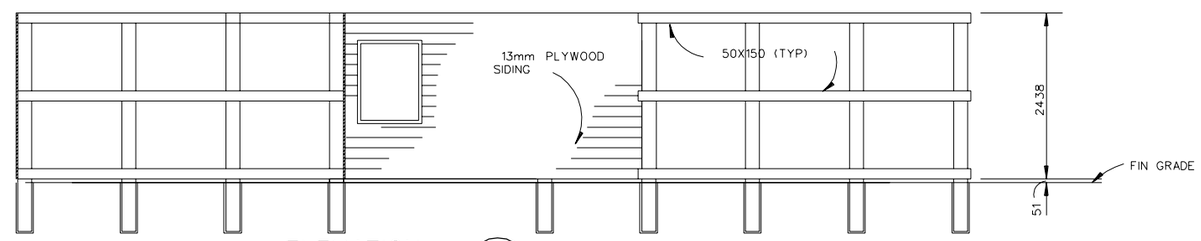
PLAN

SCALE : N.T.S.



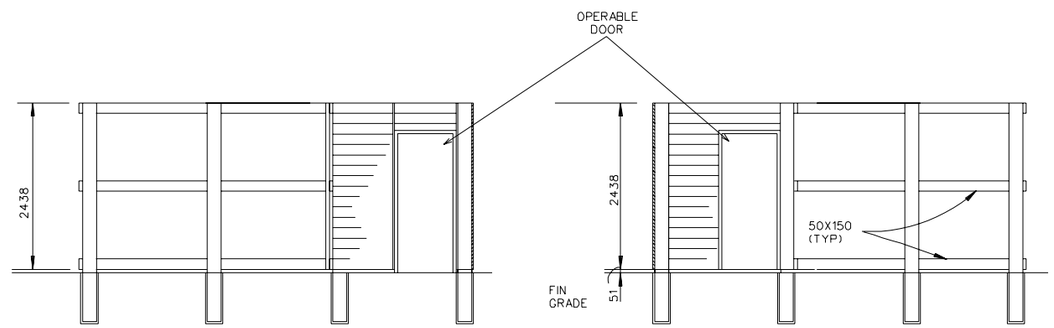
ELEVATION A

SCALE : N.T.S.



ELEVATION B

SCALE : N.T.S.



ELEVATION E

SCALE : N.T.S.

ELEVATION F

SCALE : N.T.S.

NOTE:
PROVIDE RICOCHET RESISTANT PROTECTIVE SHIELDING BEHIND TARGETS AND OVER T.O.'S TO PROTECT FROM DAMAGE IF STATION IS USED FOR LIVE FIRE.

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

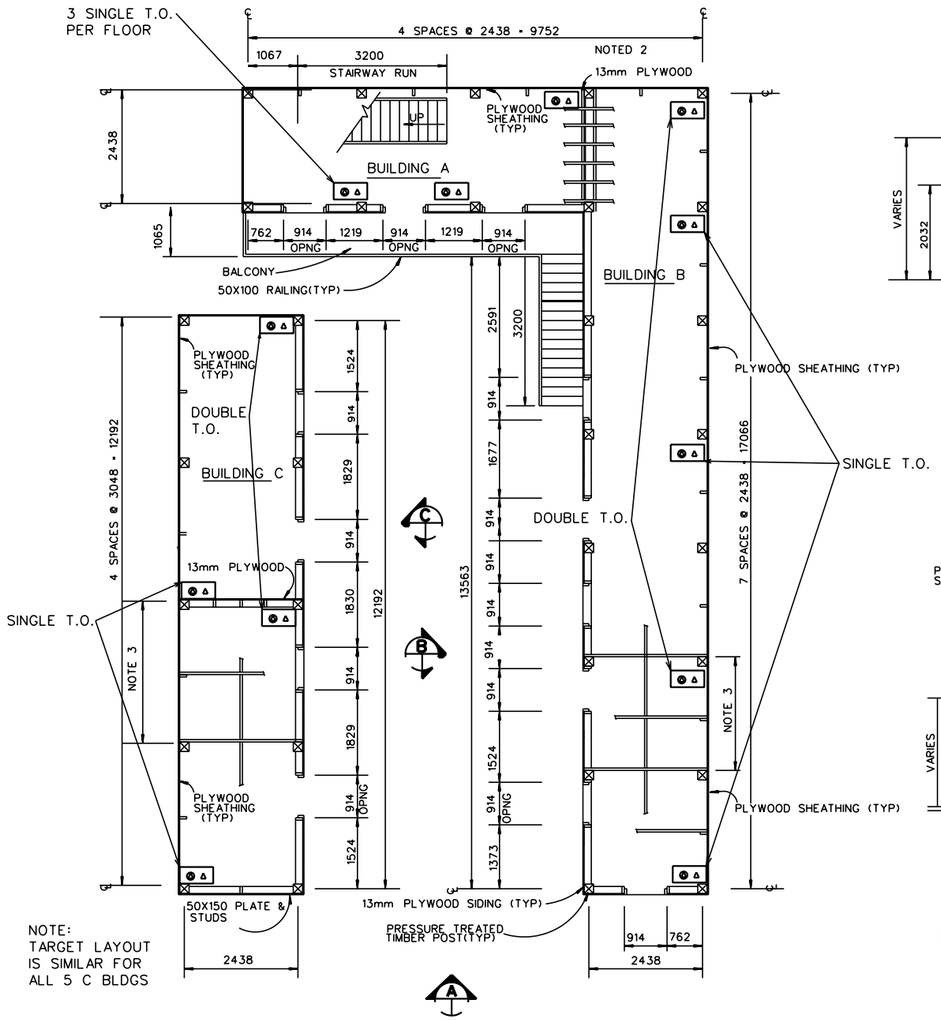
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | File name: | Plot date: | Plot scale:
Submitted by:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

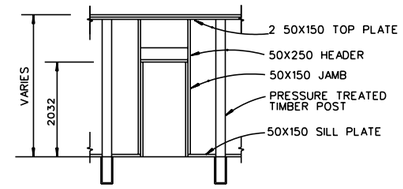
URBAN ASSAULT COURSE
STATION 1
INDIVIDUAL AND TEAM TECHNIQUES

Sheet reference number:
UAC-2

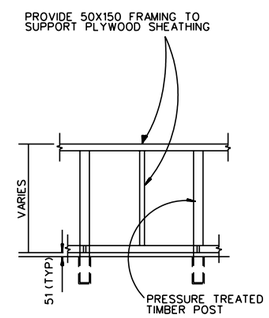


NOTE:
TARGET LAYOUT IS SIMILAR FOR ALL 5 C BLDGS

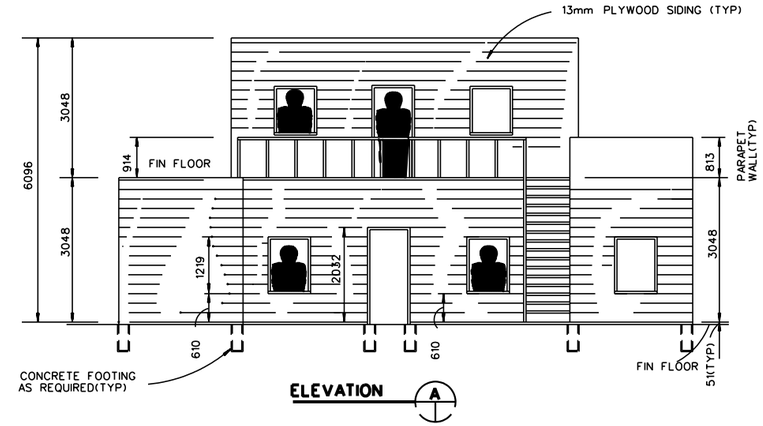
BUILDING FLOOR PLANS



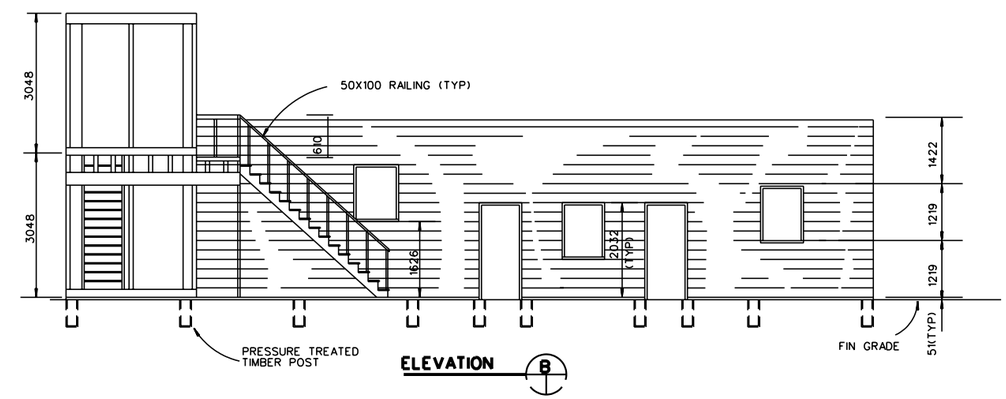
TYPICAL DOOR FRAME DETAIL



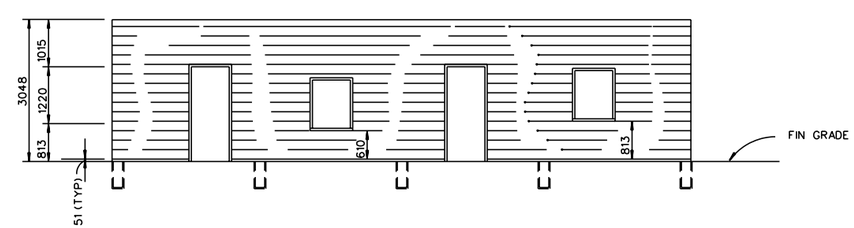
TYPICAL BACK BAY ELEVATION



ELEVATION A

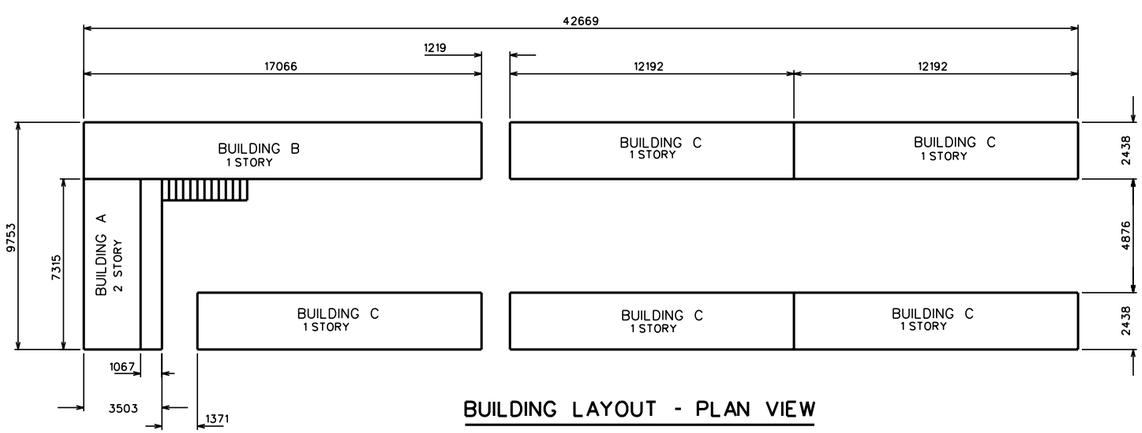


ELEVATION B



ELEVATION C

NOTE:
1. PROVIDE RICOCHET RESISTANT PROTECTIVE BEHIND EACH TARGET AND OVER EACH T.O. TO PROTECT FROM DAMAGE IF THIS STATION IS USED FOR LIVE FIRE TRAINING.



BUILDING LAYOUT - PLAN VIEW

US Army Corps of Engineers

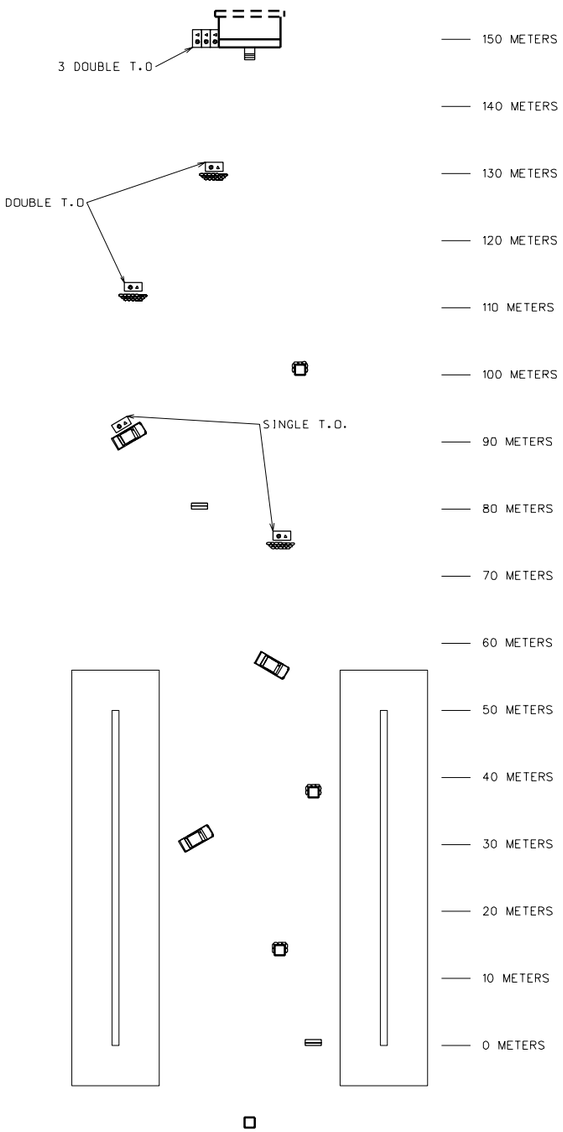
Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.:
Dwn by: | Ckd 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

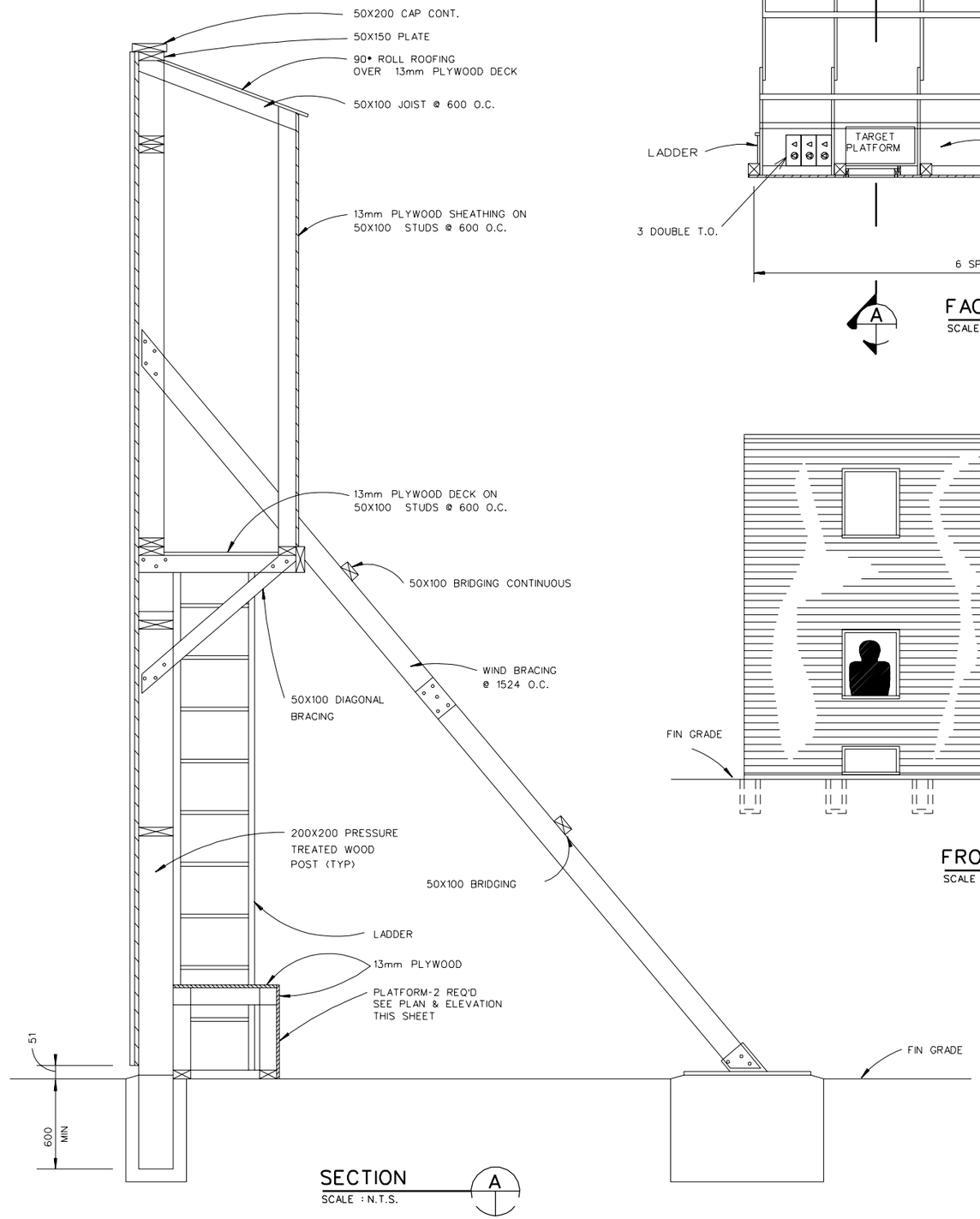
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
URBAN ASSAULT COURSE
STATION 2
SQUAD AND PLATOON TECHNIQUES

Sheet reference number:
UAC-3



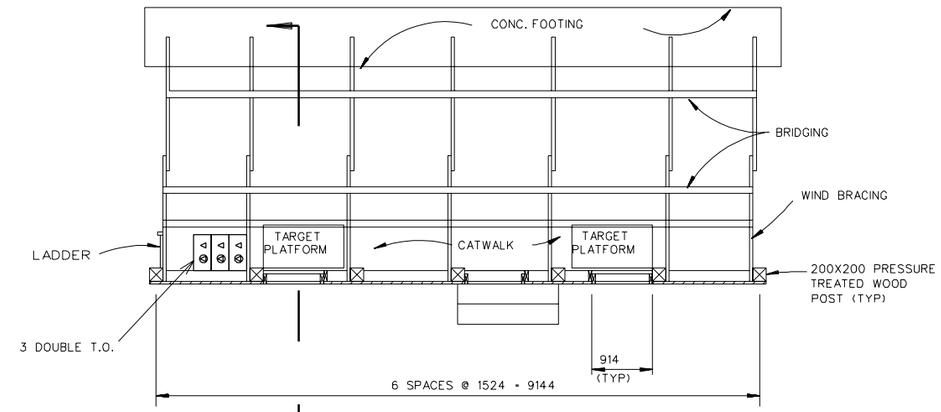
GRENADIER GUNNERY PLAN

SCALE : N.T.S.



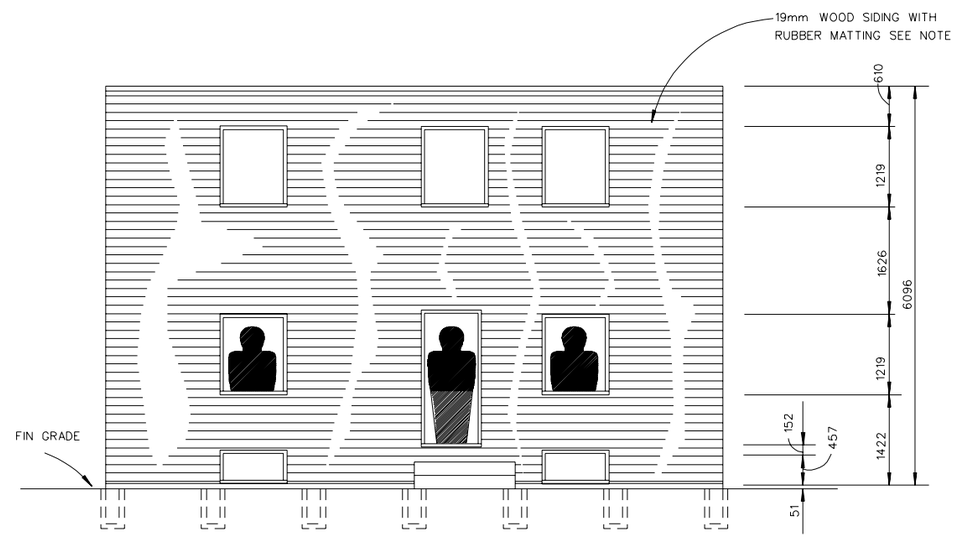
SECTION A

SCALE : N.T.S.



FACADE PLAN A

SCALE : N.T.S.



FRONT ELEVATION

SCALE : N.T.S.

NOTE:
PROVIDE 6mm to 12mm THICK, UV LIGHT AND OZONE RESISTANT, RUBBER MATTING ("LINATEX OZ" OR SIMILAR) ON THE FACE OF FRONT FACADE TO PREVENT SHATTERING OF THE WOOD FROM THE IMPACT OF THE GRENADES

PROVIDE BALLISTIC PROTECTION FOR T.O.

US Army Corps of Engineers

Rev.	Description	Date	Approved

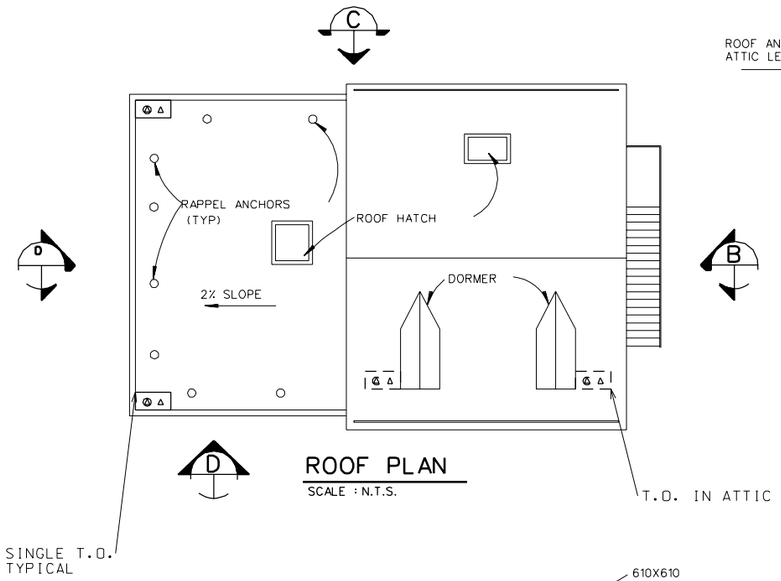
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

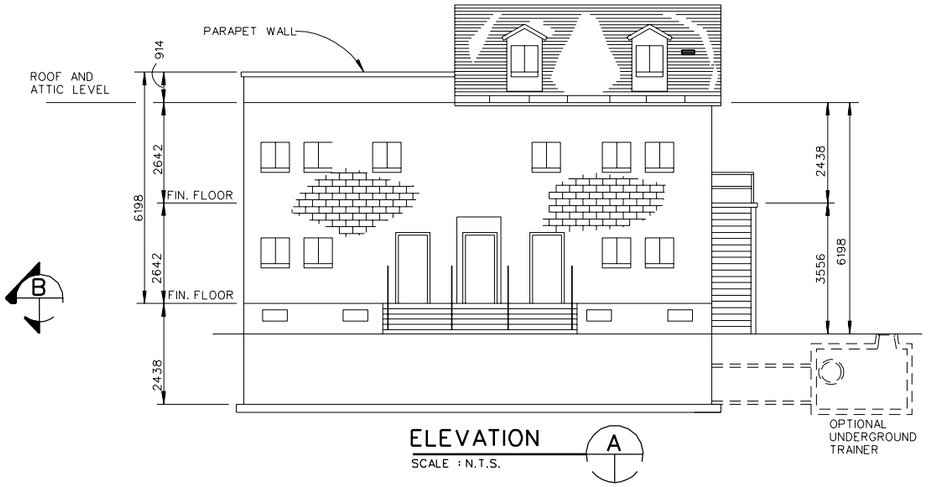
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

URBAN ASSAULT COURSE
STATION 3
GRENADIER GUNNERY

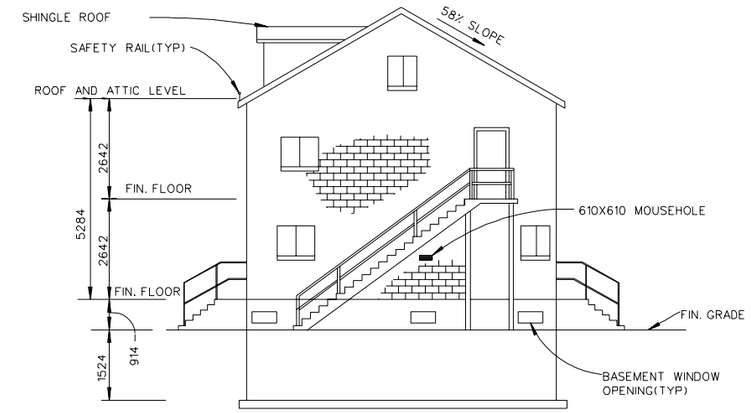
Sheet reference number:
UAC-4



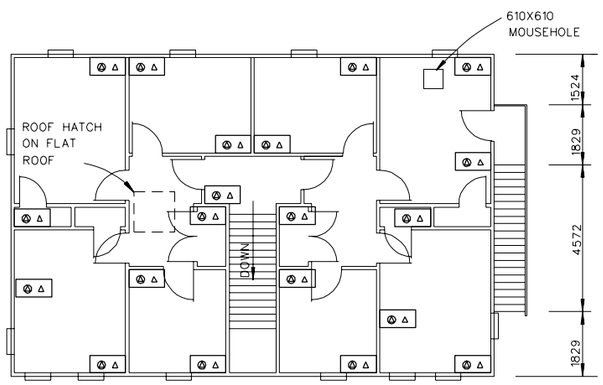
ROOF PLAN
SCALE : N.T.S.



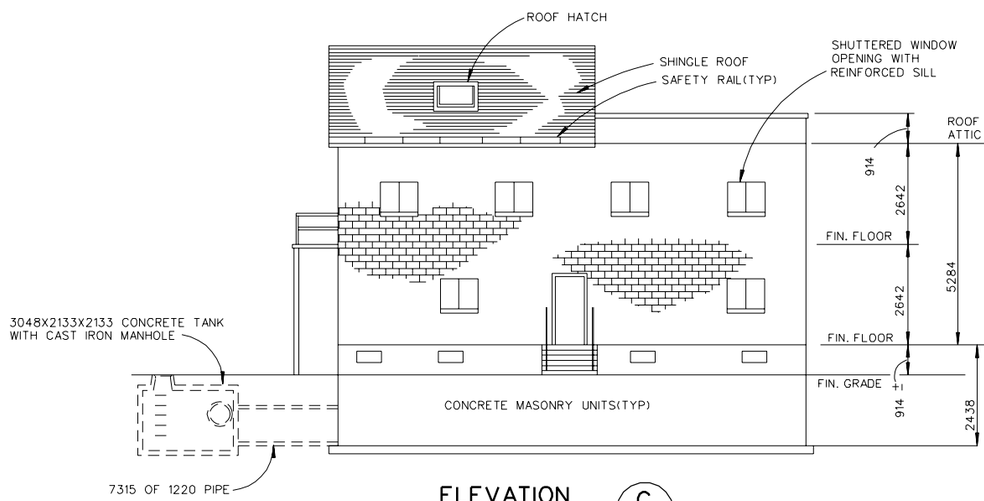
ELEVATION A
SCALE : N.T.S.



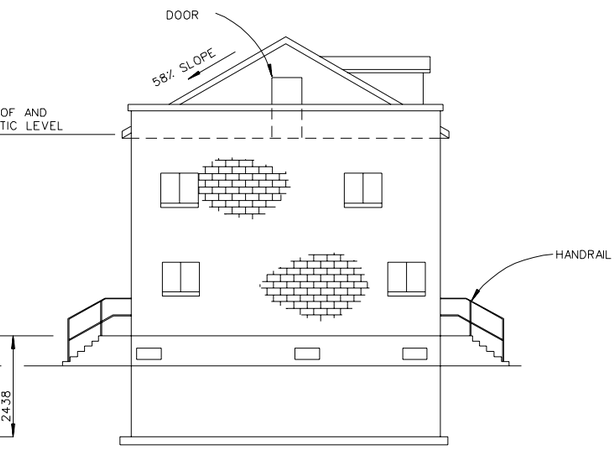
ELEVATION B
SCALE : N.T.S.



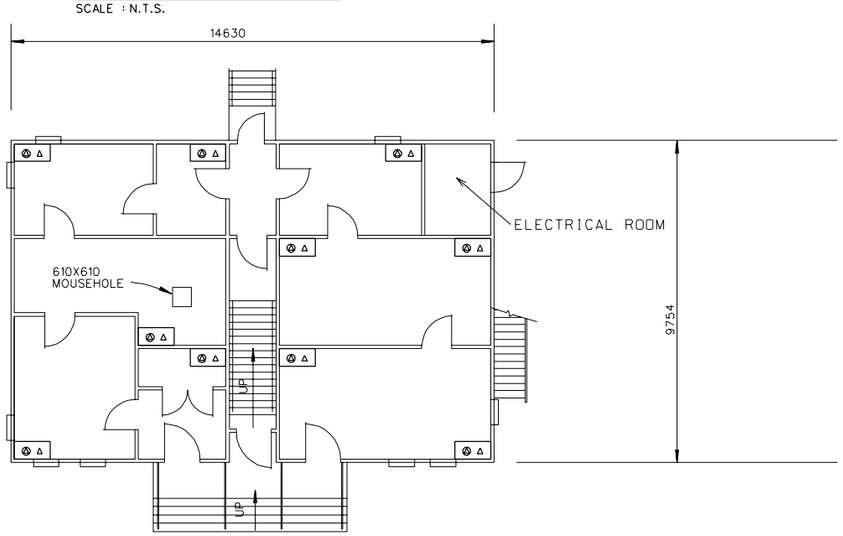
SECOND FLOOR PLAN
SCALE : N.T.S.



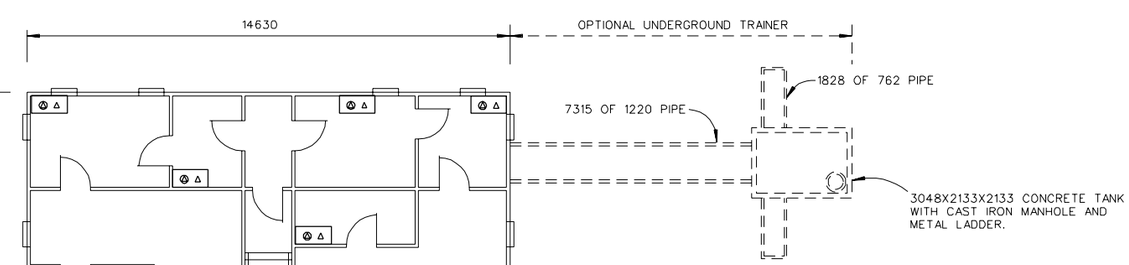
ELEVATION C
SCALE : N.T.S.



ELEVATION D
SCALE : N.T.S.



FIRST FLOOR PLAN
SCALE : N.T.S.



BASEMENT FLOOR PLAN
SCALE : N.T.S.

NOTE:
BUILDING IS NOT INTENDED FOR LIVE-FIRE TRAINING

US Army Corps of Engineers

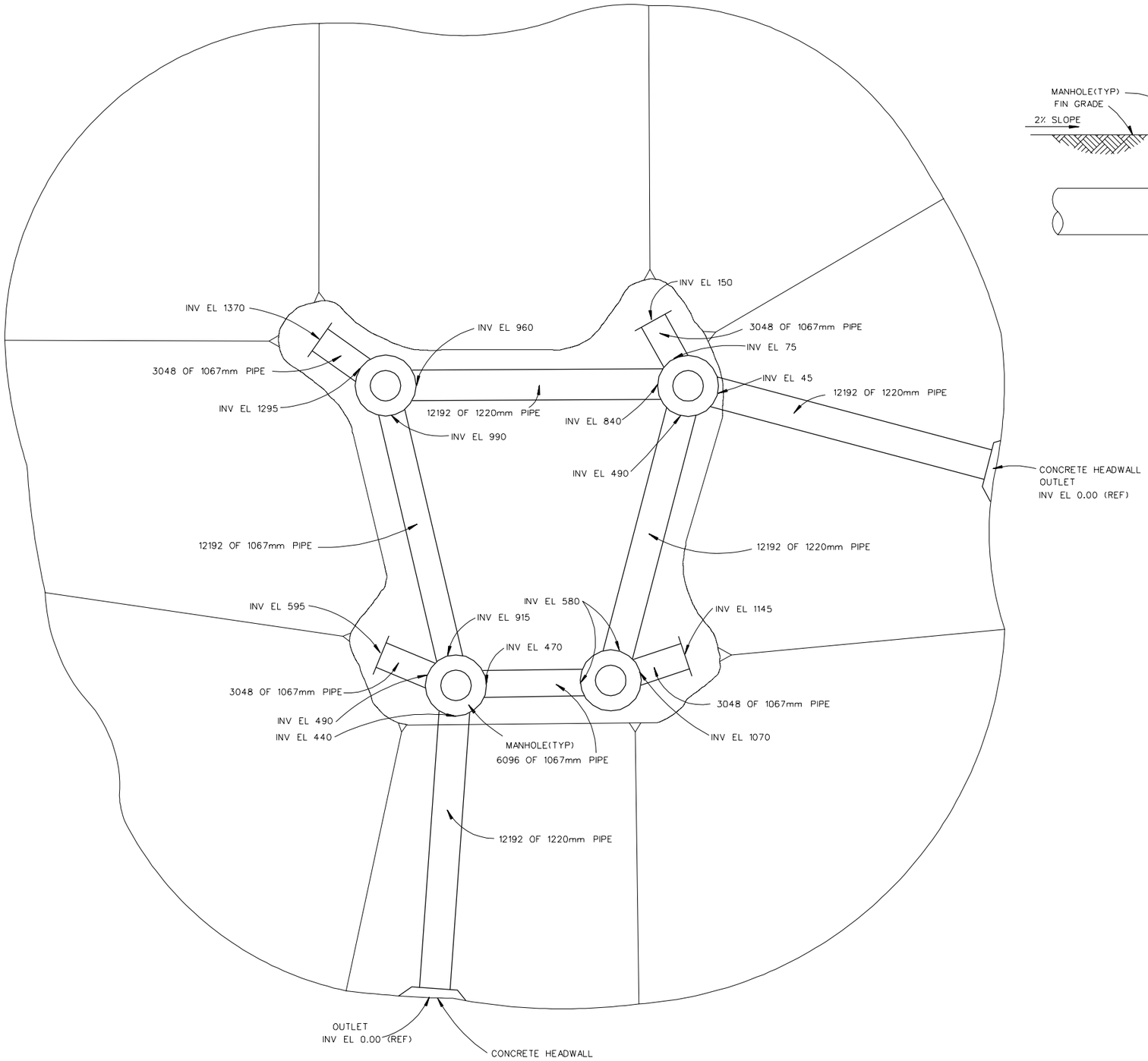
Rev.	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

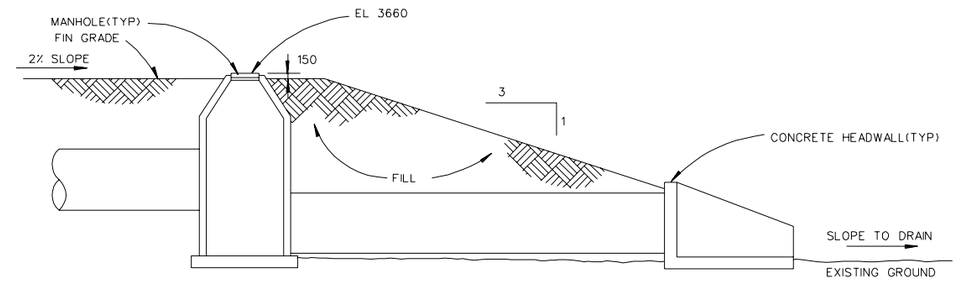
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
URBAN ASSAULT COURSE
STATION 4
URBAN OFFENSE/DEFFENSE BUILDING

Sheet reference number:
UAC-5



SITE PLAN

SCALE : 1/ 8" = 1'-0



TYPICAL SECTION

SCALE : 3/ 16" = 1'-0

NOTE: FURNISH REMOVABLE WIRE SCREEN AT ALL HEADWALL ENTRANCES.

THE UNDERGROUND TRAINER IS NOT INTENDED FOR LIVE-FIRE TRAINING

THIS STATION IS OPTIONAL. IT IS INTENDED FOR BASIC UNDERGROUND TRAINING. THE UNDERGROUND TRAINER ATTACHED TO THE URBAN OFFENSE/DEFENSE BUILDING IS INTENDED FOR MORE ADVANCED TACTICAL TRAINING

AN UNDERGROUND CHAMBER MAY BE ADDED AS AN OPTION

US Army Corps of Engineers

Rev. *	Description	Date	Approved

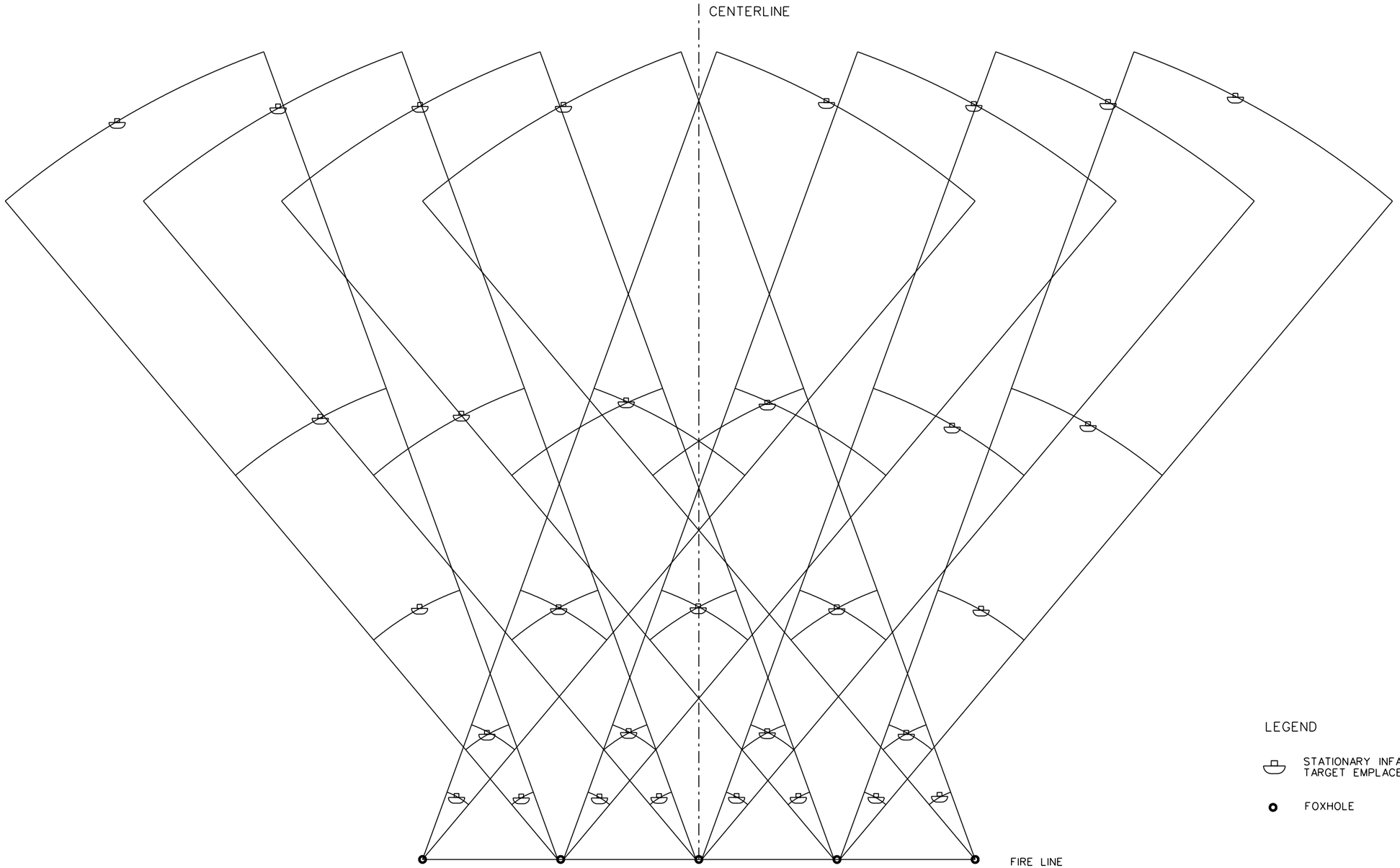
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

URBAN ASSAULT COURSE
STATION 5
UNDERGROUND TRAINER

Sheet reference number:
UAC-6



LEGEND

STATIONARY INFANTRY TARGET EMPLACEMENT

FOXHOLE

US Army Corps of Engineers

Rev. *	Description	Date	Approved

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

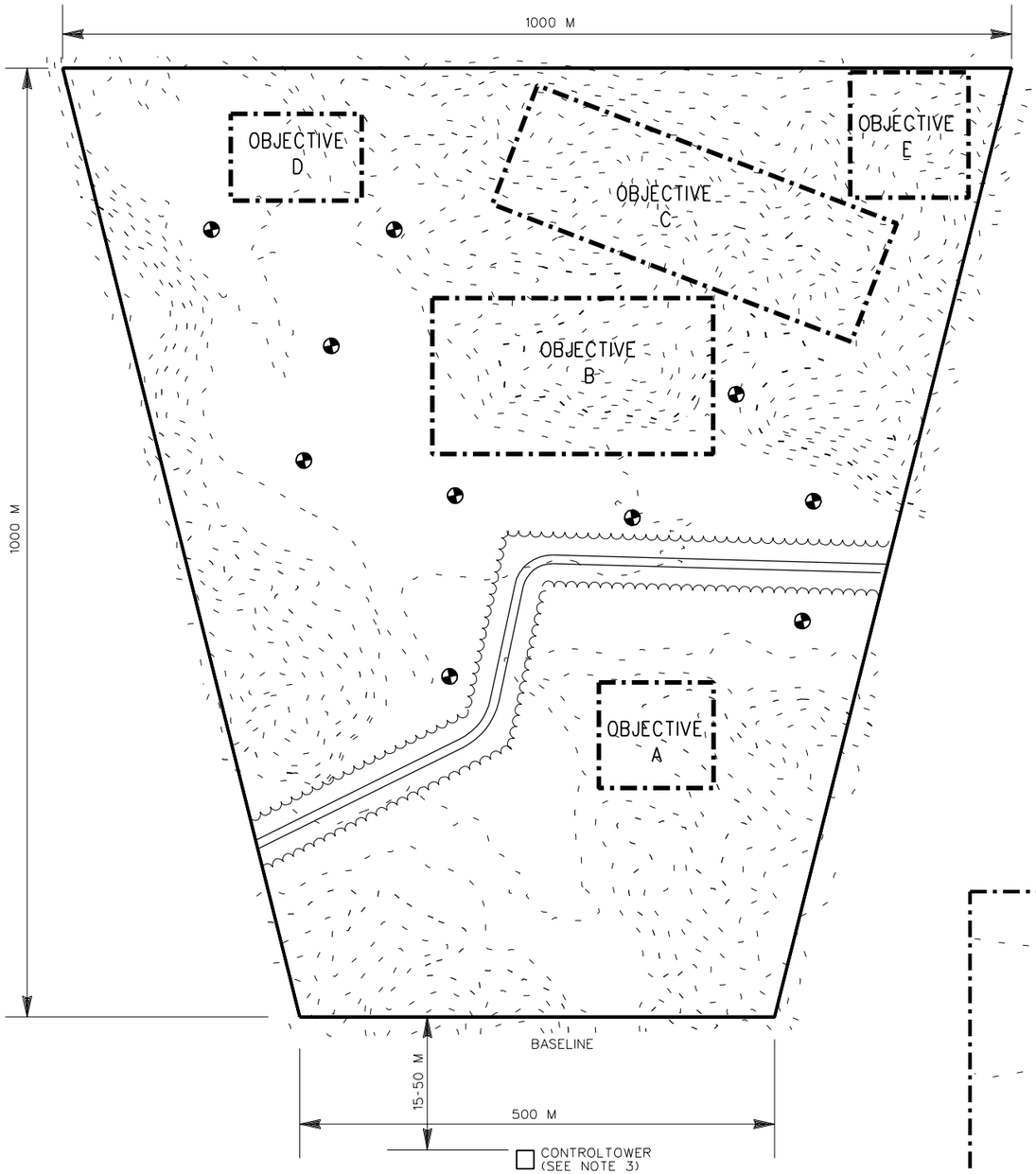
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.:
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC- 17893
SQUAD DEFENSE RANGE

Sheet reference number:
SDR-1

Sheet of

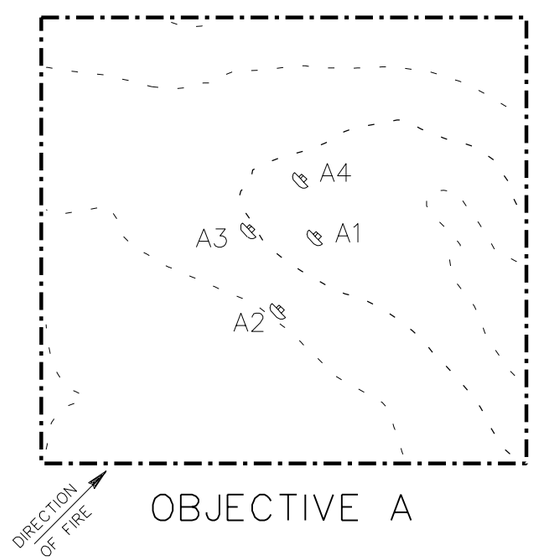


LEGEND: (SHEETS L-10 AND L-11)

- ARMOR MOVING TARGET (MAT) EMPLACEMENT
- STATIONARY ARMOR TARGET (SAT) EMPLACEMENT
- STATIONARY INFANTRY TARGET (SIT) EMPLACMENT WITH HOSTILE FIRE SIMULATOR
- MG BUNKER - MACHINEGUN (MG)
- OB BUNKER - OBSERVATION (OB)
- MOVING INFANTRY TARGET (MIT) EMPLACEMENT
- TRENCH
- DANGER AREA (CLEARED AREA WITH ROAD)
- MORTAR SIMULATION DEVICE EMPLACEMENT

GENERAL NOTES:

1. ISBC LAYOUT DEPICTS TARGET POSITIONS AND TRAINING SCENARIO SPECIFICALLY TAILORED FOR THE TOPOGRAPHY SHOWN. LIMIT MARKERS MUST BE POSITIONED BASED ON SITE SPECIFIC CONDITIONS FOR EACH OBJECTIVE AND THE ENTIRE RANGE.
2. SEE SHEET L-11 FOR OBJECTIVES B,C,D AND E.
3. RANGE BOUNDARIES ARE GENERIC AND REPRESENT MAXIMUM EXPECTED LAND USE REQUIREMENTS. ACTUAL RANGE BOUNDARY CONFIGURATION MAY VARY DEPENDING ON SITE SPECIFIC CONDITIONS.
4. SITE CONTROL TOWER 15-50 METERS FROM THE BASELINE IN AN AREA THAT WILL PROVIDE AN UNOBSTRUCTED VIEW OF THE BASELINE.
5. SEE DRAWING C-14 FOR TRENCH LAYOUT AND DETAILS.



OBJECTIVE A

US Army Corps of Engineers

Rev. *	Description	Date	Approved

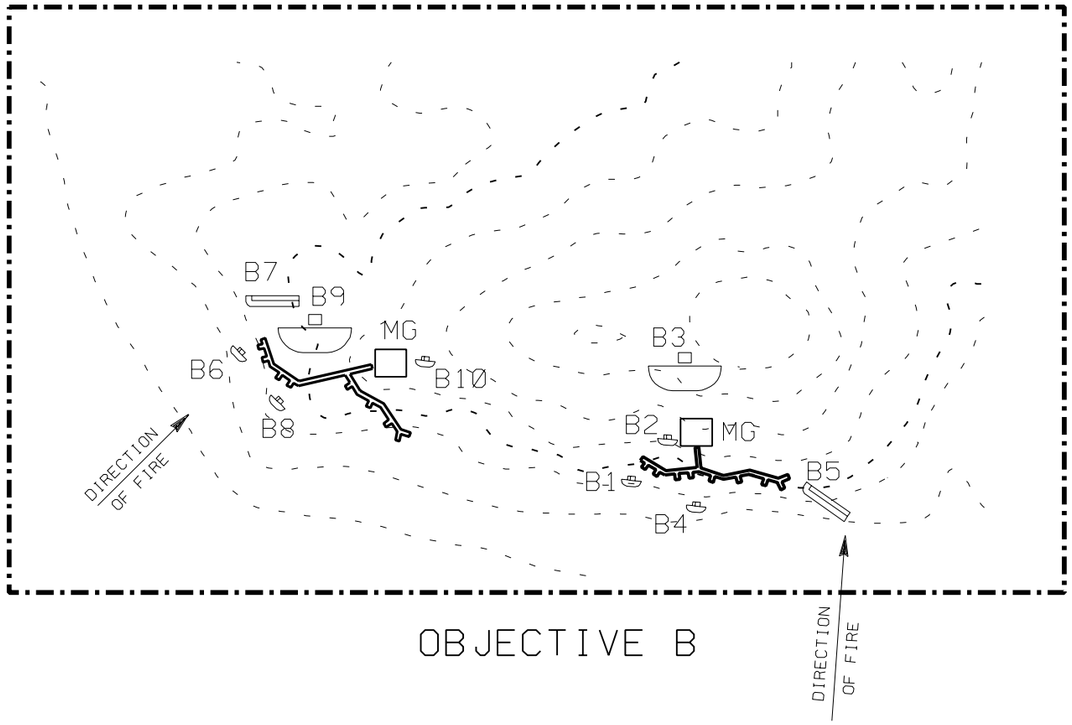
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | File name: | Plot date: | Plot scale:
Submitted by:

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

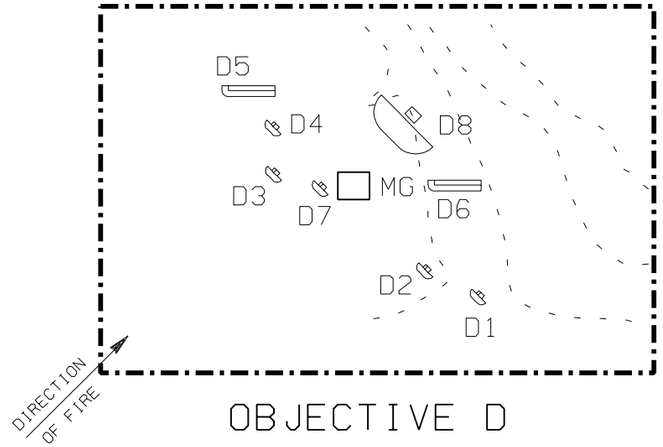
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17895
INFANTRY SQUAD BATTLE COURSE
(1 OF 2)

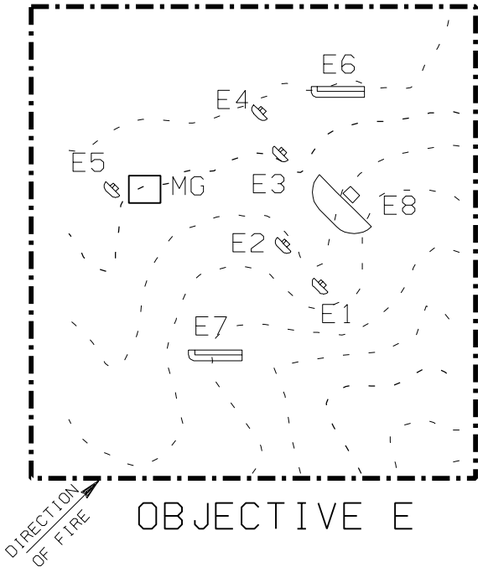
Sheet reference number:
ISB-1
Sheet of



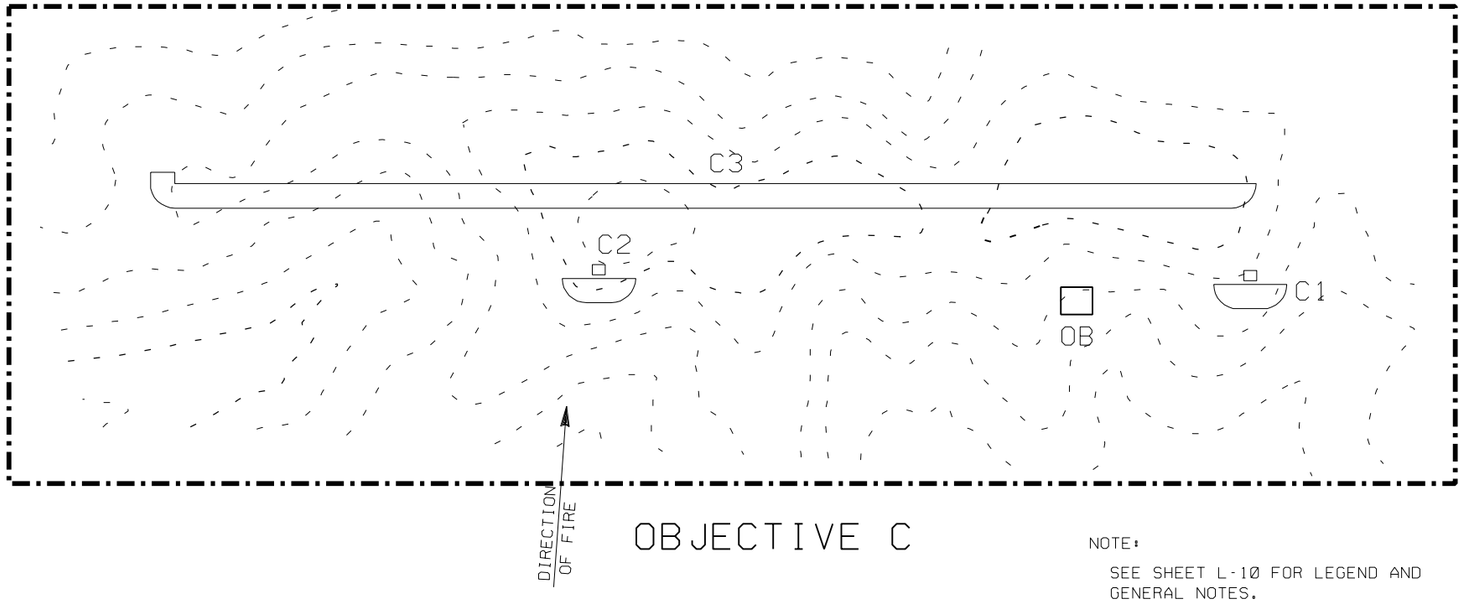
OBJECTIVE B



OBJECTIVE D



OBJECTIVE E



OBJECTIVE C

NOTE:

SEE SHEET L-10 FOR LEGEND AND GENERAL NOTES.

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | File name: | Plot order: | Plot scale:
Submitted by:

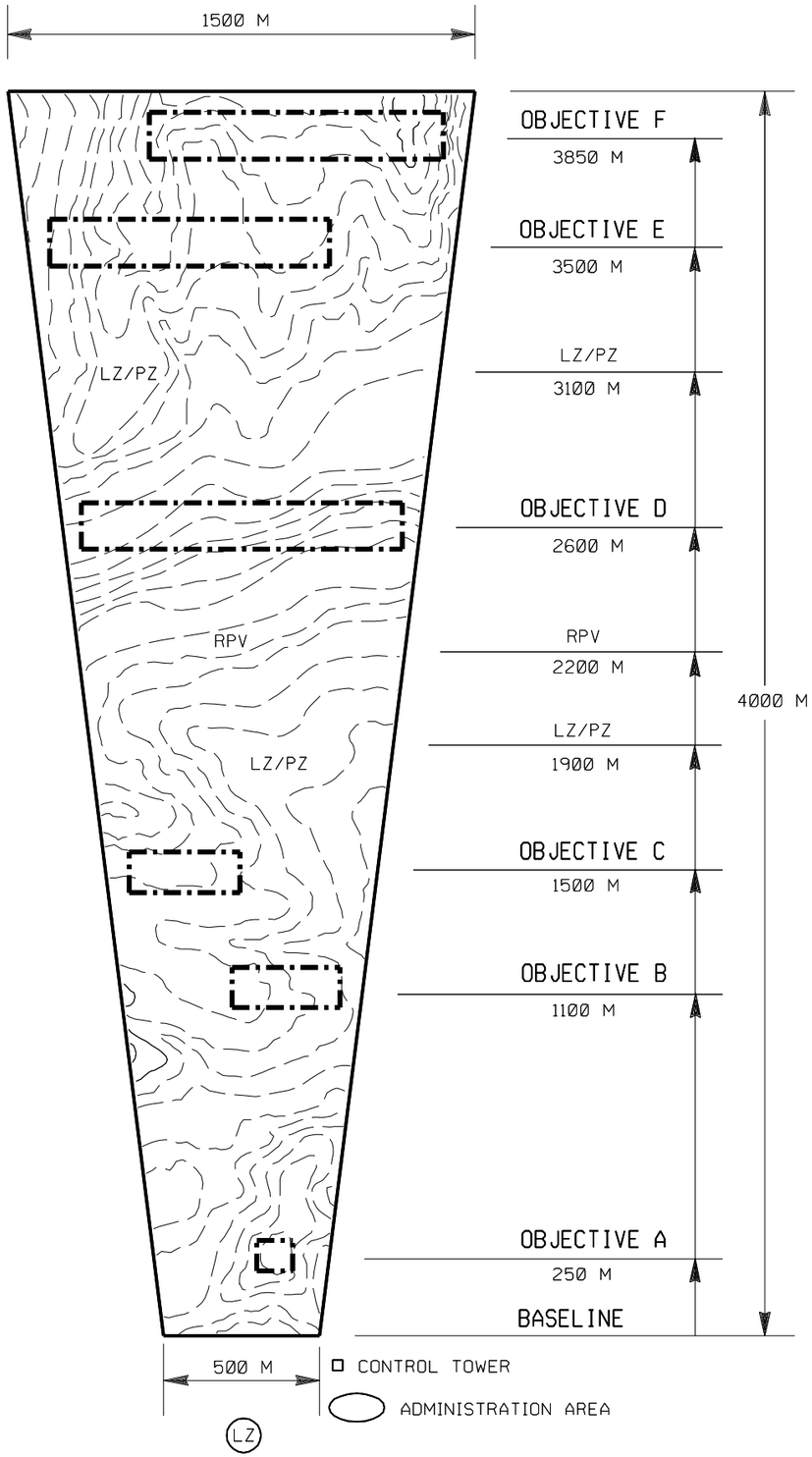
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17895
INFANTRY SQUAD BATTLE COURSE
(2 OF 2)

Sheet reference number:
ISB-2

Sheet of



LEGEND:

- ARMOR MOVING TARGET CARRIER (AMTC) EMPLACEMENT
- STATIONARY ARMOR TARGET (SAT) EMPLACEMENT
- STATIONARY INFANTRY TARGET (SIT) EMPLACMENT WITH HOSTILE FIRE SIMULATOR
- MG BUNKER - MACHINEGUN (MG)
- LZ/PZ LANDING ZONE/PICKUP ZONE
- INFANTRY MOVING TARGET (IMT) EMPLACEMENT
- TRENCH
- MORTAR SIMULATION DEVICE EMPLACEMENT
- RPV REMOTE PILOTED VEHICLE
- ASSAULT/DEFEND HOUSE WITH STATIONARY INFANTRY TARGET EMPLACEMENT
- LZ LANDING ZONE

DESIGNER NOTES:

1. IPBC LAYOUT DEPICTS TARGET POSITIONS AND TRAINING SCENARIOS SPECIFICALLY TAILORED FOR THE TOPOGRAPHY SHOWN. THE INSTALLATION'S TRAINING OFFICER MUST DETERMINE THE LAYOUT OF THE IPBC IN ORDER TO MAKE BEST USE OF THE AVAILABLE LAND. THE SIZE, POSITIONING, AND DISTANCE FROM THE BASELINE OF EACH OBJECTIVE IS FLEXIBLE AND SHOULD BE ADJUSTED TO SUIT ANY GIVEN RANGE.

2. LIMIT MARKERS MUST BE POSITIONED BASED ON SITE-SPECIFIC CONDITIONS FOR EACH OBJECTIVE AND THE ENTIRE RANGE.

3. RANGE BOUNDARIES ARE GENERIC AND REPRESENT MAXIMUM EXPECTED LAND-USE REQUIREMENTS. ACTUAL RANGE BOUNDARY CONFIGURATION MAY VARY DEPENDING ON SITE SPECIFIC CONDITIONS.

4. SITE CONTROL TOWER 15-50 METERS BEHIND THE BASELINE IN AN AREA THAT WILL PROVIDE AN UNOBSTRUCTED VIEW OF THE BASELINE. SITE THE ADMINISTRATION AREA APPROXIMATELY 250 METERS BEHIND THE BASELINE. BOTH THE CONTROL TOWER AND THE ADMINISTRATION AREA SHOULD BE LOCATED TO ONE SIDE OF THE BASLINE IN ORDER TO PROVIDE AN UNOBSTRUCTED ASSEMBLY AND ADVANCEMENT AREA.

5. THIS RANGE IS NOT DESIGNED FOR TANKS OR MECHANIZED VEHICLES BEYOND THE BASELINE.

6. THE INSTALLATION'S TRAINING OFFICER MUST CHOOSE SIX TARGET-FIRING POSITION PAIRS TO RECIEVE THE LOCATION OF MISS AND HIT SYSTEMS (LOMAH).

7. SEE SHEETS L-13 AND L-14 FOR OBJECTIVES A,B,C,D,E AND F LAYOUTS.

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

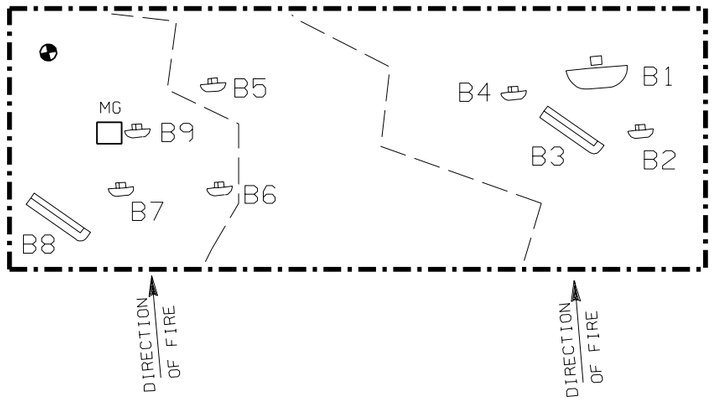
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

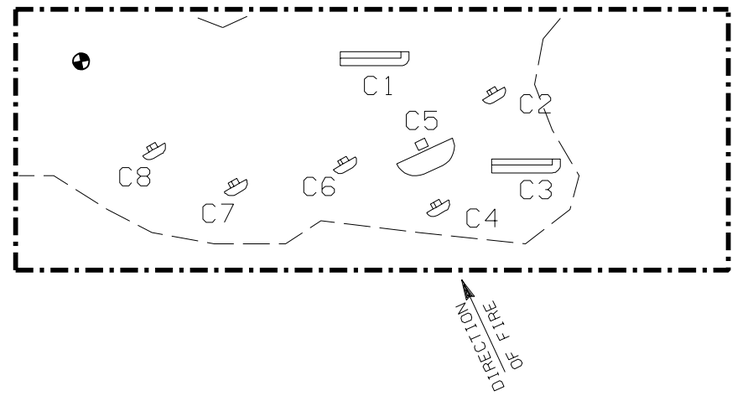
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
FCC• 17897
INFANTRY PLATOON BATTLE COURSE
(1 OF 3)

Sheet reference number:
IPB-1
Sheet of

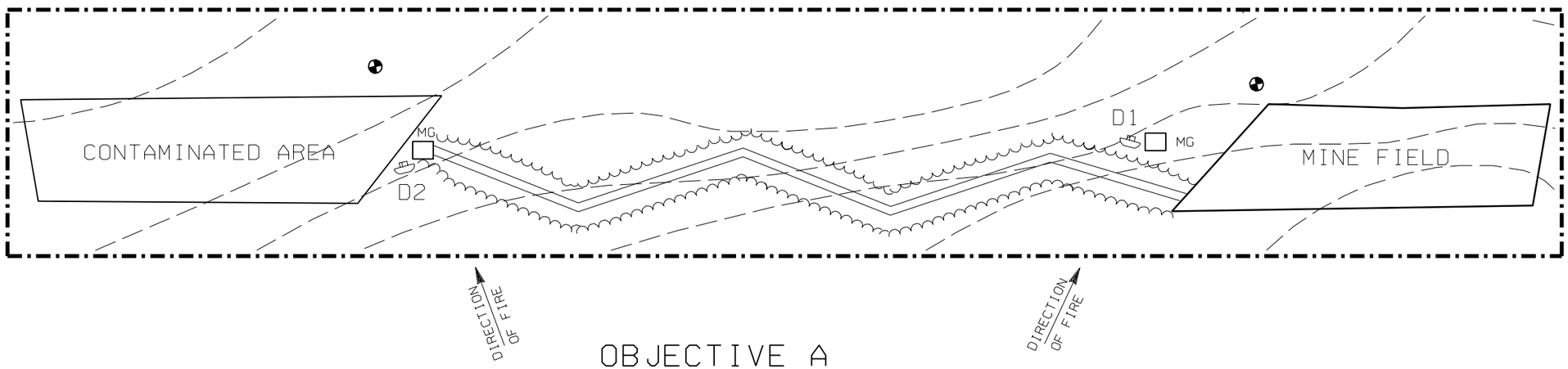
OBJECTIVE B



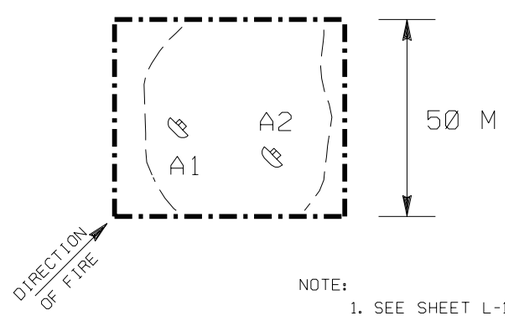
OBJECTIVE C



OBJECTIVE D



OBJECTIVE A



NOTE:

1. SEE SHEET L-12 FOR LEGEND AND DESIGNER NOTES.
2. SEE DRAWING C-14 FOR TRENCH LAYOUT AND DETAILS.

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

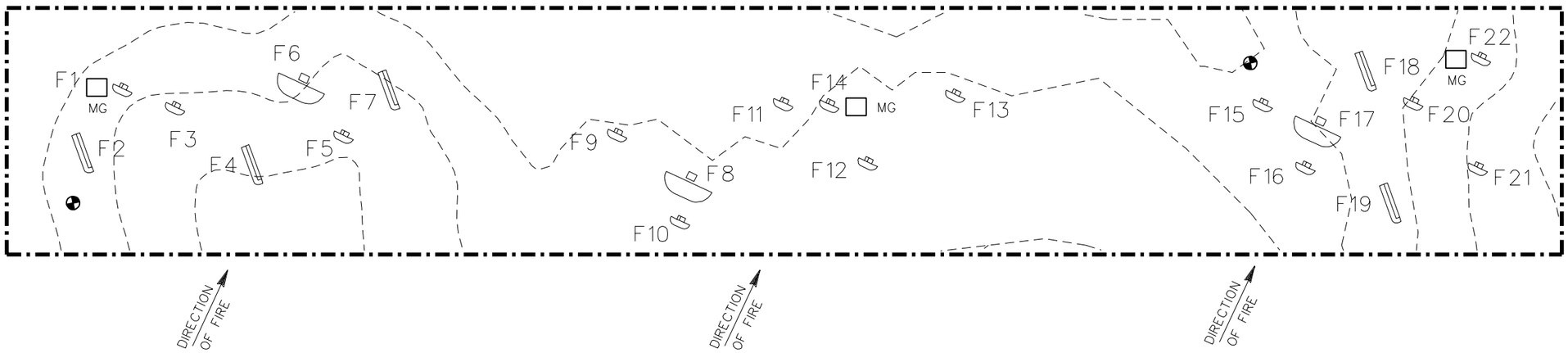
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17897
INFANTRY PLATOON BATTLE COURSE
(2 OF 3)

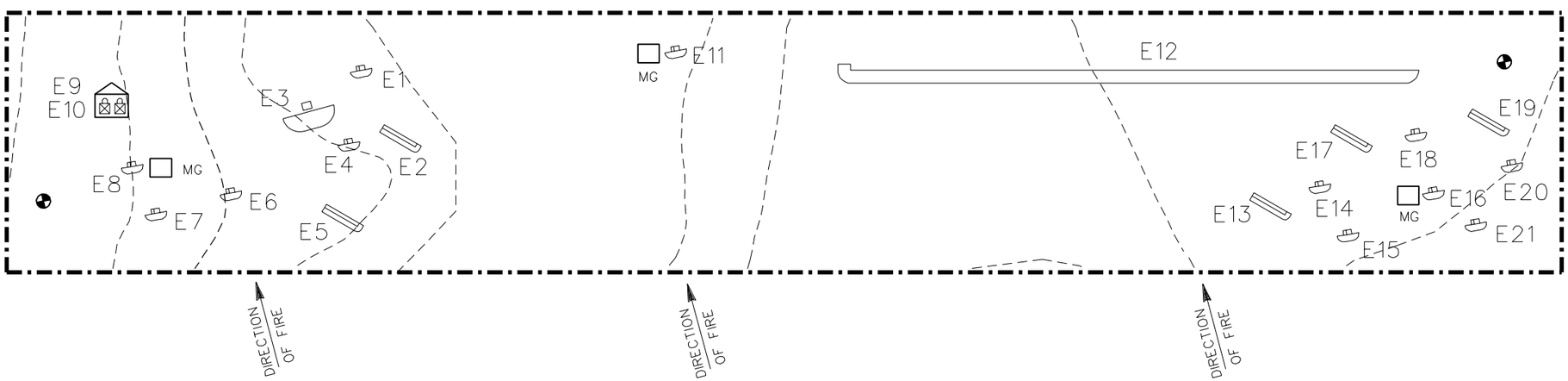
Sheet reference number:
IPB-2

Sheet of

OBJECTIVE F



OBJECTIVE E



NOTE:
1. SEE SHEET L-12 FOR LEGEND AND GENERAL NOTES

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

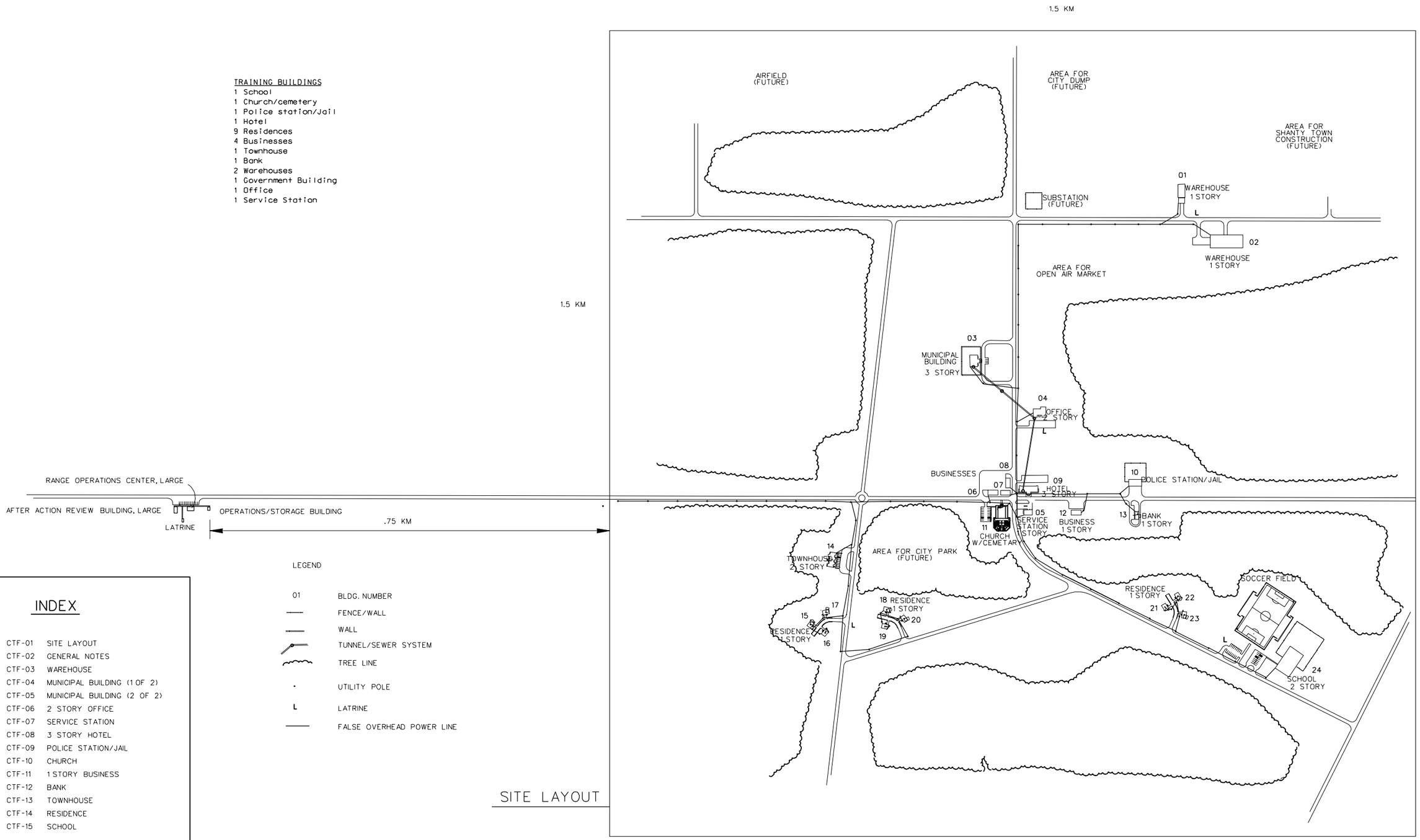
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC* 17897
INFANTRY PLATOON BATTLE COURSE
(3 OF 3)

Sheet reference number:
IPB-3
Sheet of

COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)

TRAINING BUILDINGS
1 School
1 Church/cemetery
1 Police station/Jail
1 Hotel
9 Residences
4 Businesses
1 Townhouse
1 Bank
2 Warehouses
1 Government Building
1 Office
1 Service Station



LEGEND

01	BLDG. NUMBER
——	FENCE/WALL
——	WALL
	TUNNEL/SEWER SYSTEM
	TREE LINE
•	UTILITY POLE
L	LATRINE
——	FALSE OVERHEAD POWER LINE

INDEX

CTF-01	SITE LAYOUT
CTF-02	GENERAL NOTES
CTF-03	WAREHOUSE
CTF-04	MUNICIPAL BUILDING (1 OF 2)
CTF-05	MUNICIPAL BUILDING (2 OF 2)
CTF-06	2 STORY OFFICE
CTF-07	SERVICE STATION
CTF-08	3 STORY HOTEL
CTF-09	POLICE STATION/JAIL
CTF-10	CHURCH
CTF-11	1 STORY BUSINESS
CTF-12	BANK
CTF-13	TOWNHOUSE
CTF-14	RESIDENCE
CTF-15	SCHOOL

SITE LAYOUT

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

COLLECTIVE TRAINING FACILITY

SITE LAYOUT

Sheet reference number:
CTF-01

GENERAL NOTES

REFERENCE CRITERIA

The design and construction must comply with applicable codes and standards including: technical instruction TI 800-01, "Design Criteria"; Department of the Army regulations, technical manuals, handbooks, standards, and specifications; UBC, NEMA, ANSI, UL, ASTM, and NFPA standards, as required.

FUNCTIONAL REQUIREMENTS

All dimensions not labeled are in millimeters. Gutters, downspouts and splash blocks should be provided where required by climatic conditions. Covered entries and ice guards may be necessary in northern climates.

Concrete Masonary Units shown on the drawings are for illustrative purposes only. This represents one type of several construction methods that could be considered in design of buildings.

All buildings are designed to be accessed only by able-bodied personnel and do not require ADA compliance unless dictated by local criteria.

Openings in the walls are to simulate windows. There are no operable windows.

Lightning Protection is not required for this building.

FIRE PROTECTION

Fire Protection is not required per fire codes for these buildings. Consult local Fire Marshall for compliance with local laws.

ELECTRICAL SYMBOLS AND NOTES

CAMERA WITH CAMERA OUTLET

TARGET, TWIST-LOCK POWER OUTLET AND 2-CAT 5E CABLE JACKS (RJ-45)

All buildings shall be served by 120/240V 1 phase, 3-wire secondary power. Rigid Steel conduit shall extend a minumun of 1524 mm (5') outside the building for power and communication circuits entering and leaving the building. Voltage drop shall comply with NEC standards and Army technical manuals. Grounding will be installed in accordance with NFPA 70, the NEC, and other applicable standards.

The panel board shall be 120/240V single phase, mounted inside building. Target data and power outlets and camera outlets shall be provided.

Illumination levels will be designed in accordance with IES. Interior lighting shall consist of fluorescent lamps at 30 foot-candles. Exterior lighting shall be provided with seperateswitching located near points of egress.

The electrical system shall comply with NFPA 70 and NFPA 101. Exit signs will be provided in accordance with NFPA 101.

US Army Corps of Engineers

Rev #	Description	Date	Approved

Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no. ctf-02 warehouse.DGN
Drawing code: STD 179-23-01
File name:
Plot date:
Plot scale:

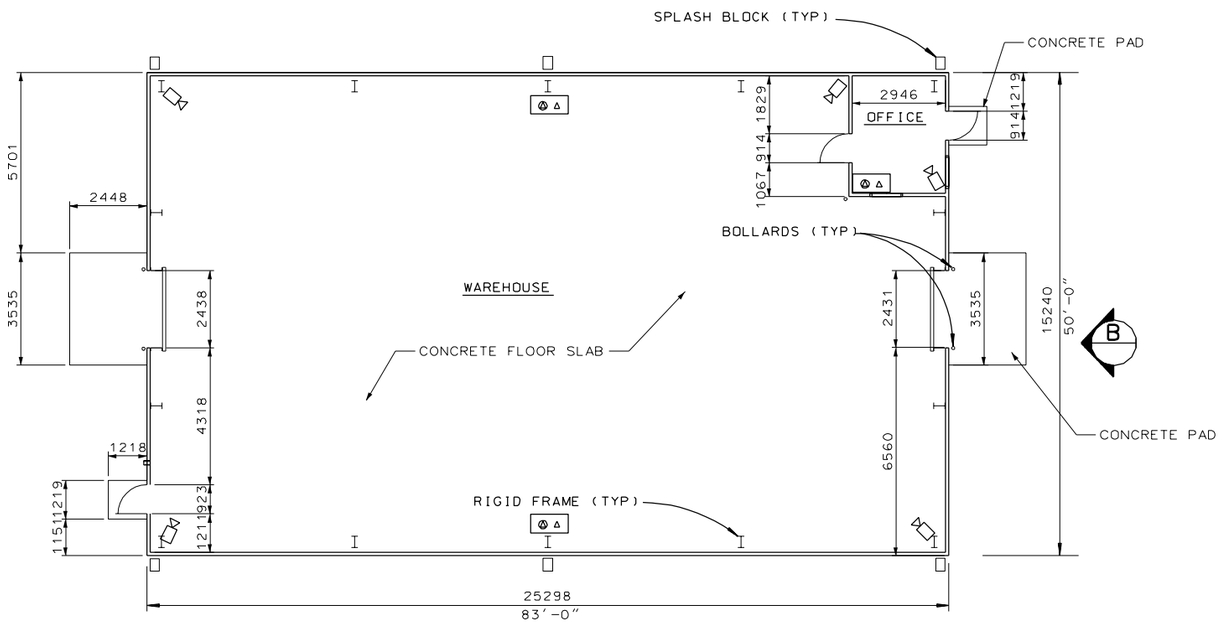
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

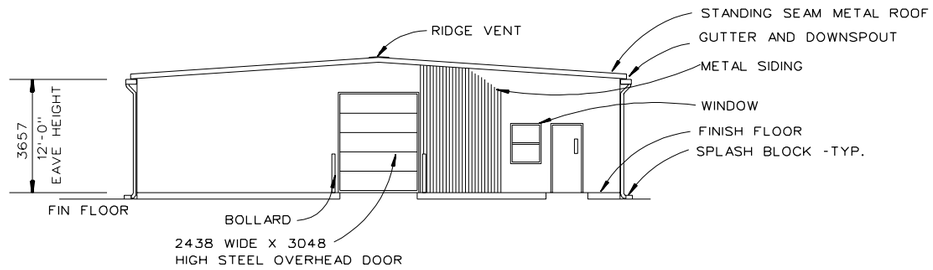
COLLECTIVE TRAINING FACILITY

GENERAL NOTES

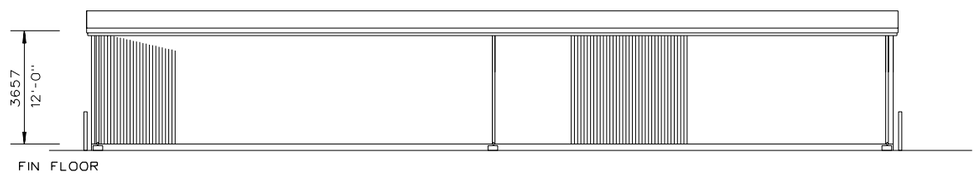
Sheet reference number:
CTF-02



FLOOR PLAN
SCALE : 1:50



ELEVATION B
SCALE : 1:50



ELEVATION A
SCALE : 1:50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

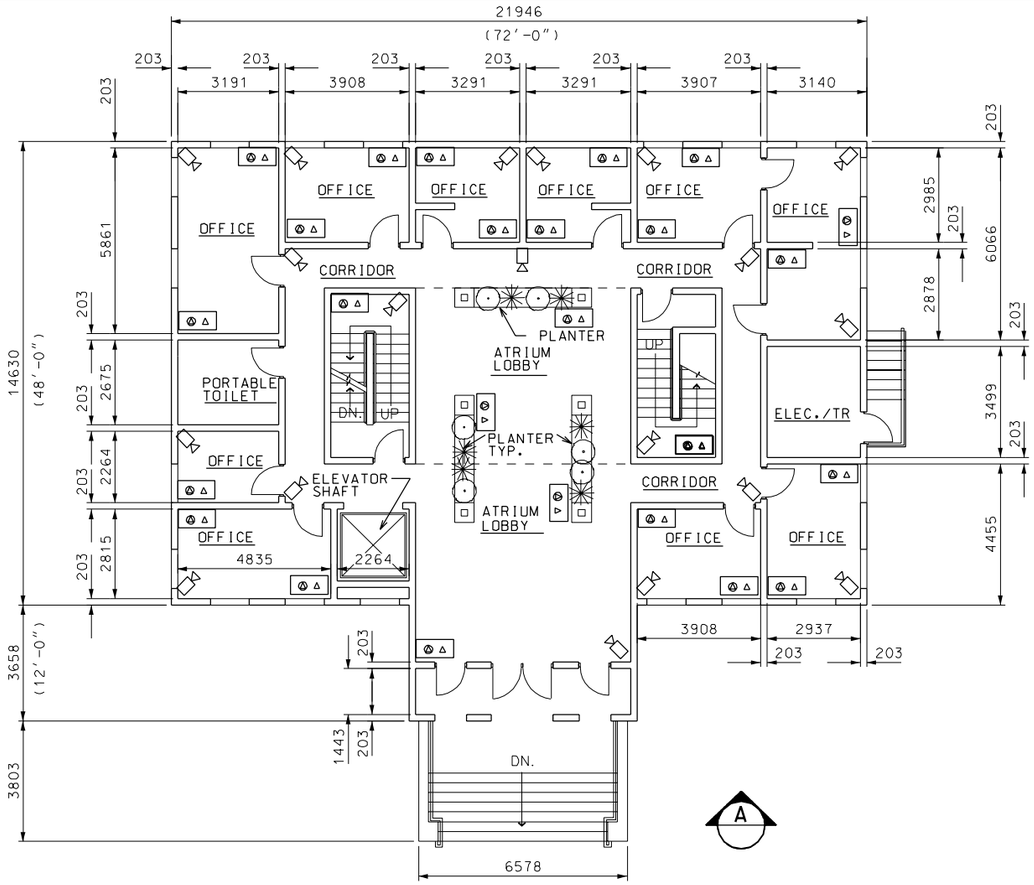
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no. ctf-02_warehouse.DGN
Reviewed by: Drawing code: STD 779-23-01
Submitted by: File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

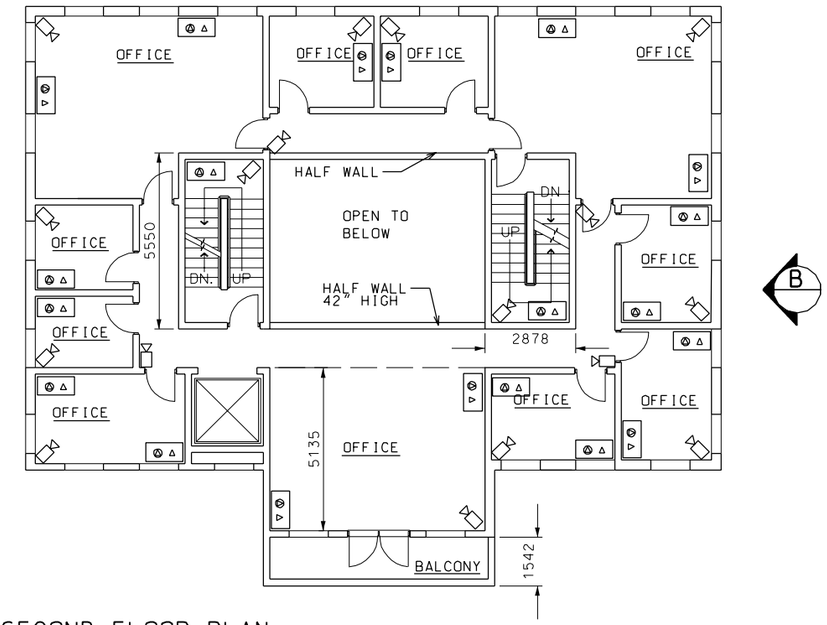
COLLECTIVE TRAINING FACILITY
WAREHOUSE
PLANS AND ELEVATIONS

Sheet reference number:
CTF-03



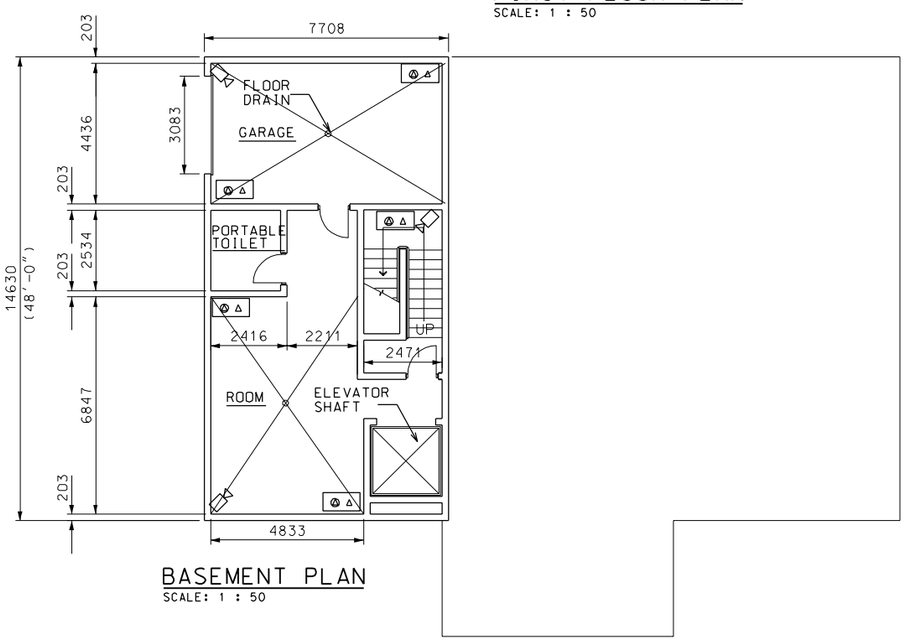
FIRST FLOOR PLAN

SCALE: 1 : 50



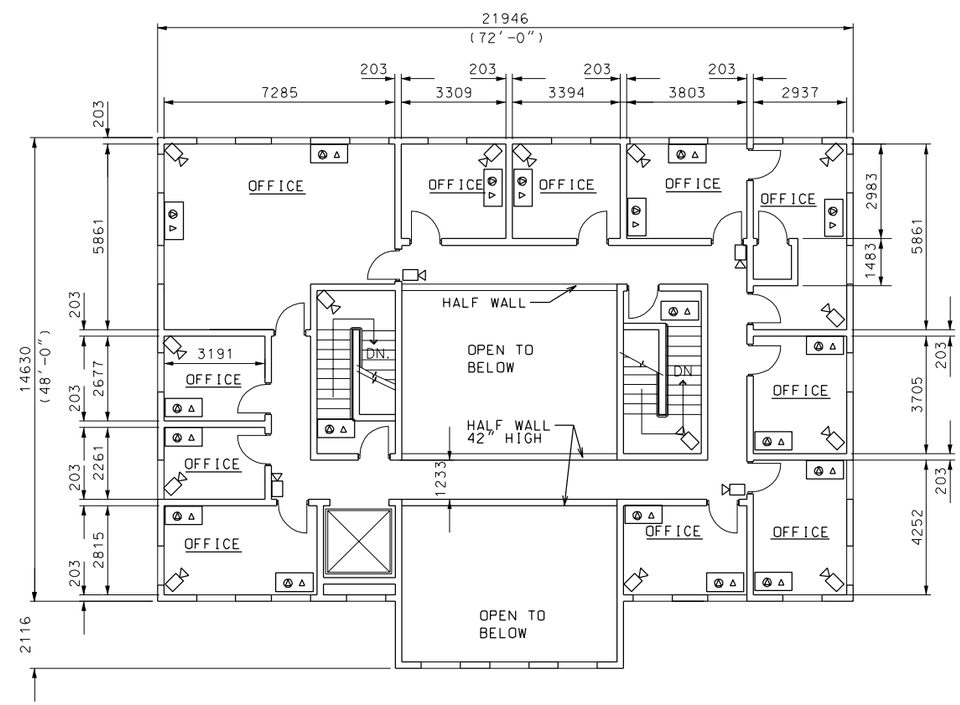
SECOND FLOOR PLAN

SCALE: 1: 50



BASEMENT PLAN

SCALE: 1 : 50



THIRD FLOOR PLAN

SCALE: 1: 50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved

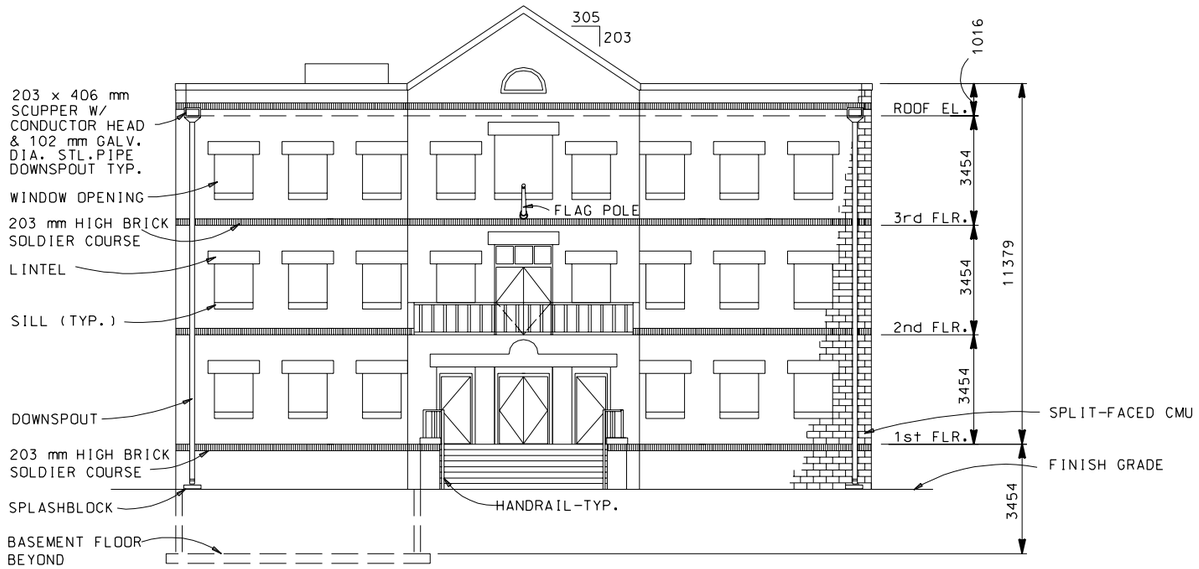
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

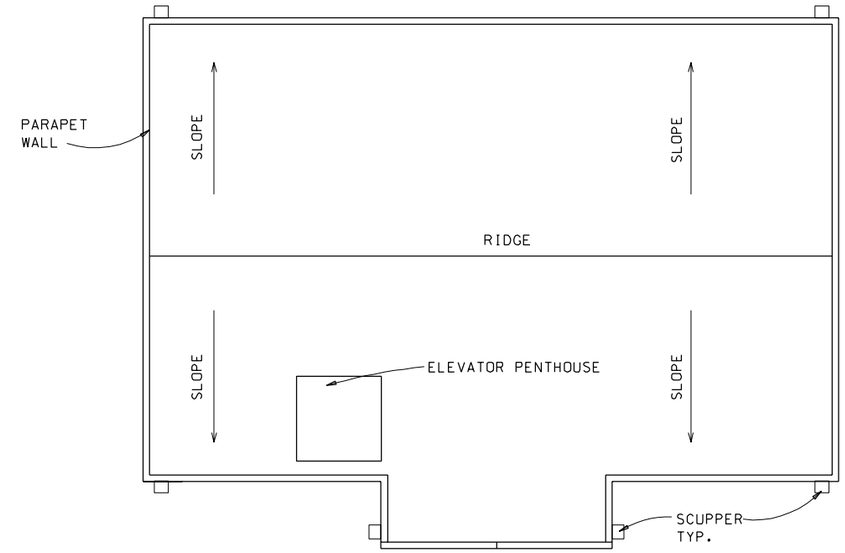
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

COLLECTIVE TRAINING FACLIITY
MUNICIPAL BUILDING
PLANS

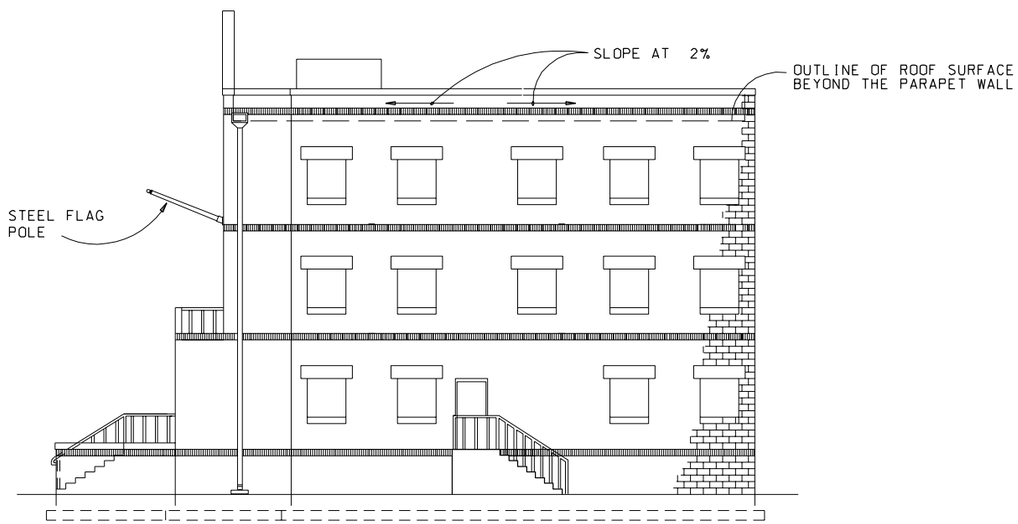
Sheet reference number:
CTF-04



ELEVATION A
SCALE : 1 : 50



ROOF PLAN
SCALE: 1: 50



ELEVATION B
SCALE : 1 : 50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved

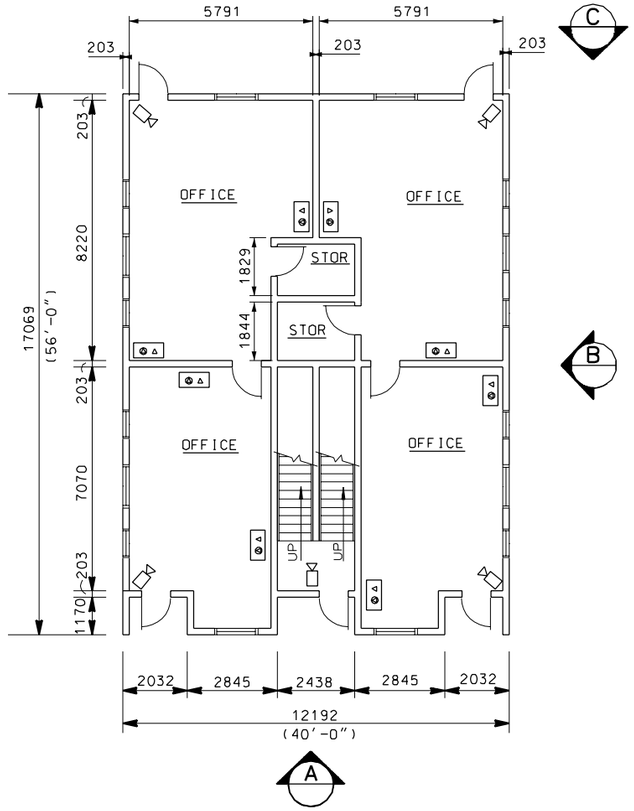
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

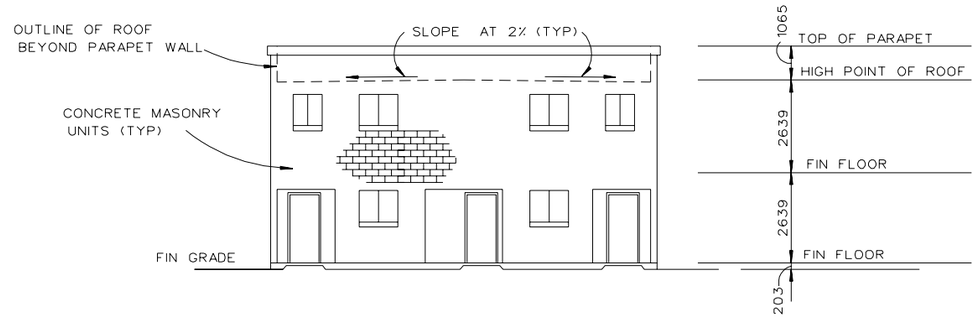
COLLECTIVE TRAINING FACILITY
MUNICIPAL BUILDING
ELEVATIONS

Sheet reference number:
CTF-05



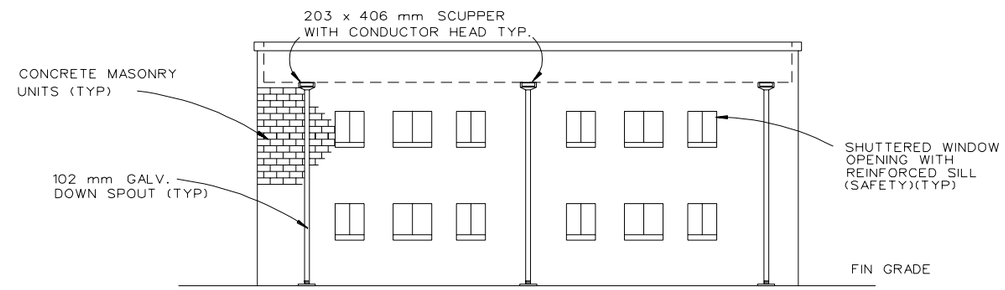
FIRST FLOOR PLAN

SCALE: 1: 50



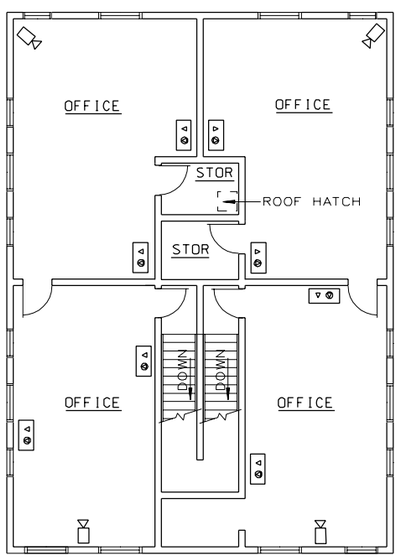
ELEVATION A

SCALE: N.T.S



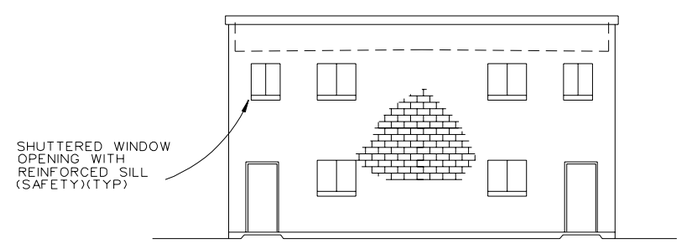
ELEVATION B

SCALE: N.T.S



SECOND FLOOR PLAN

SCALE: 1: 50



ELEVATION C

SCALE: N.T.S

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

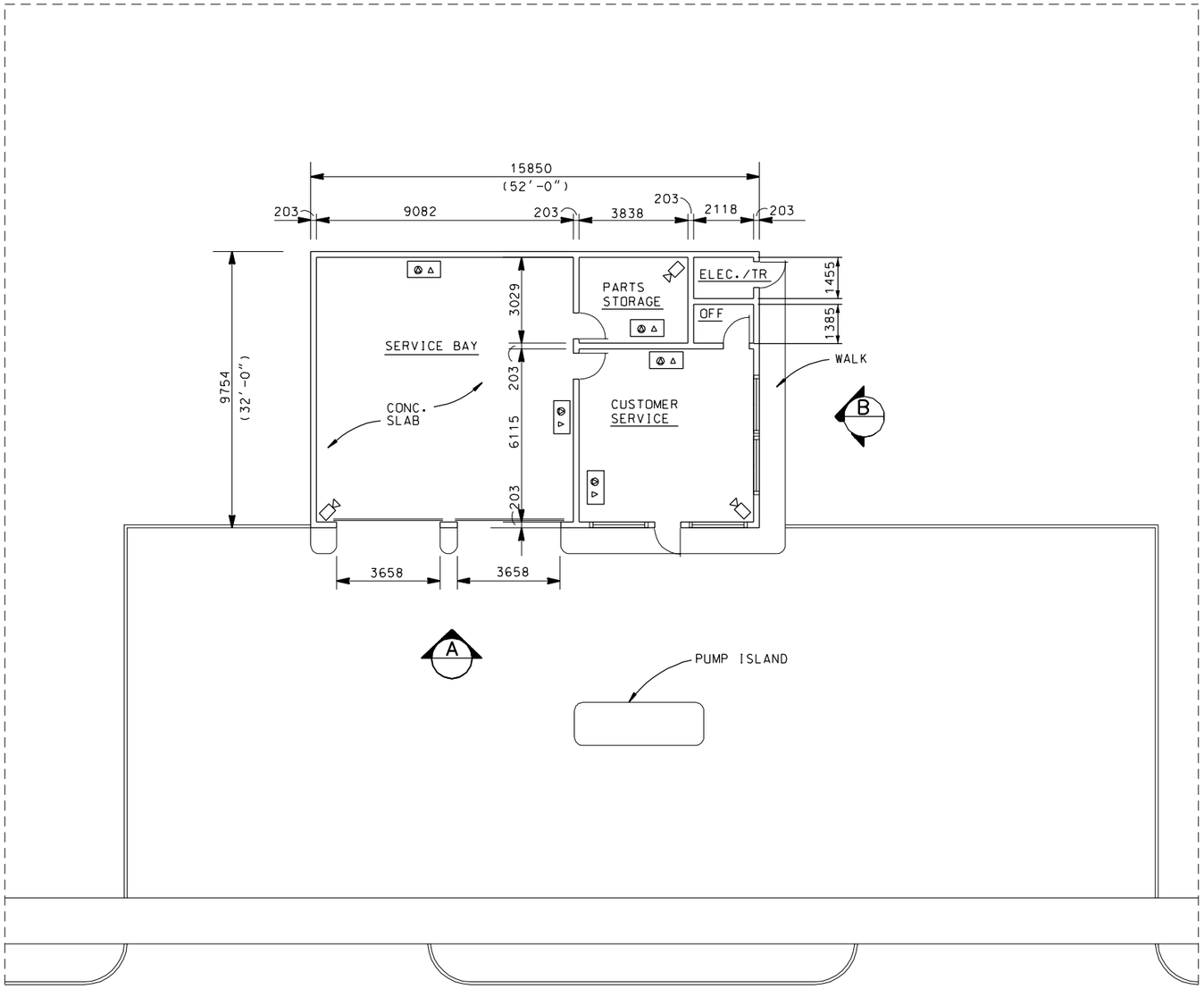
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | Drawing no.
Submitted by: | File name: 310 1 1 2-01 Plot date: | Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

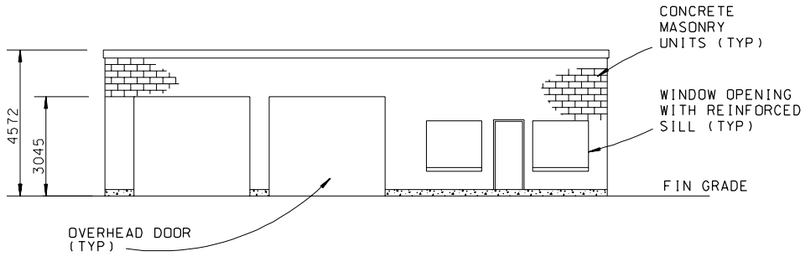
COLLECTIVE TRAINING FACILITY
2 STORY OFFICE
PLANS AND ELEVATIONS

Sheet reference number:
CTF-06



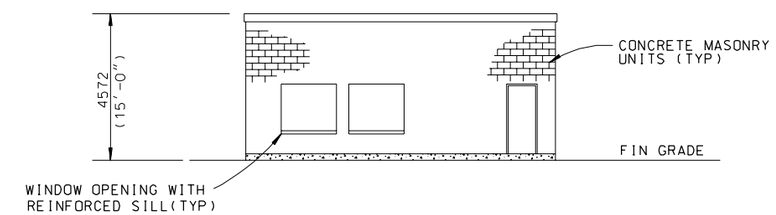
SITE PLAN/FLOOR PLAN

SCALE : 1:50



ELEVATION A

SCALE : N.T.S



ELEVATION B

SCALE : N.T.S

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev #	Description	Date	Approved

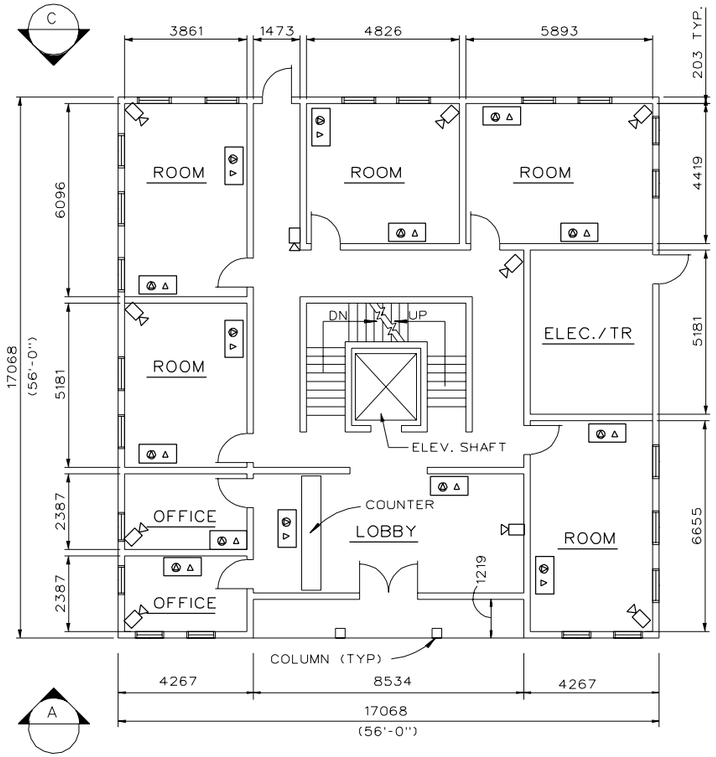
Designed by: STDA17DGN
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:
Rev.

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

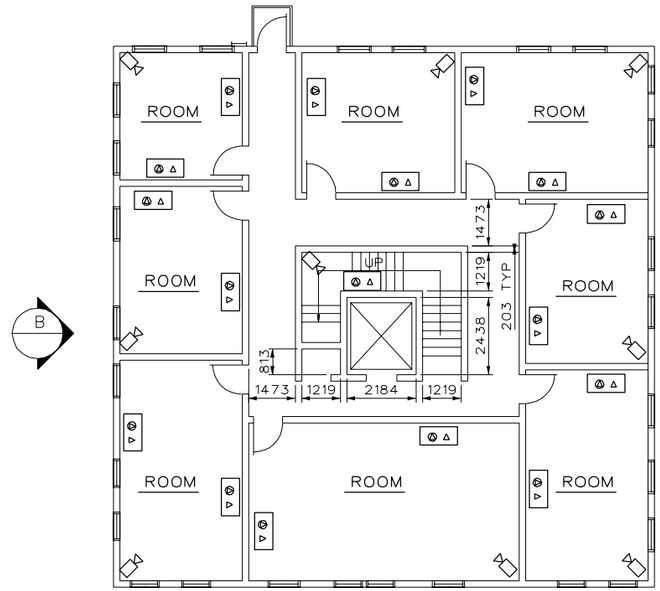
COLLECTIVE TRAINING FACILITY
SERVICE STATION
PLANS AND ELEVATIONS

Sheet reference number:
CTF-07



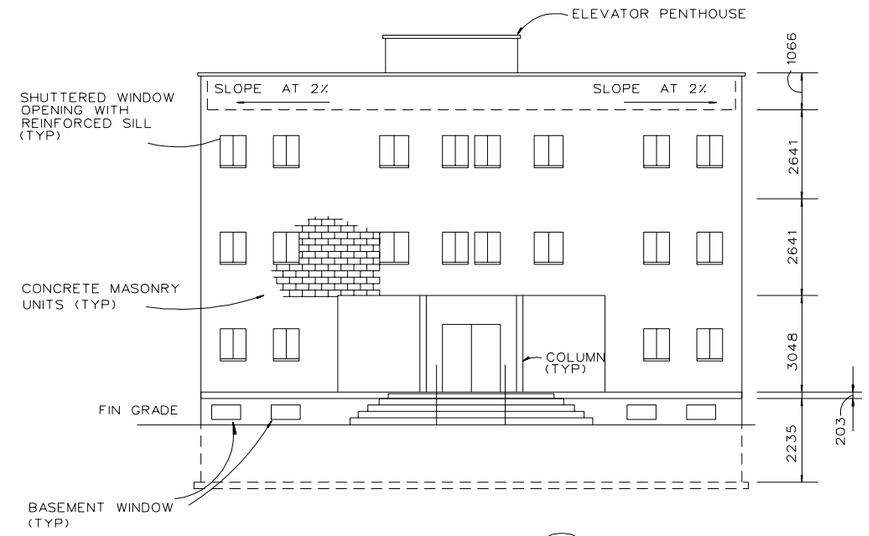
FIRST FLOOR PLAN

SCALE: 1:50



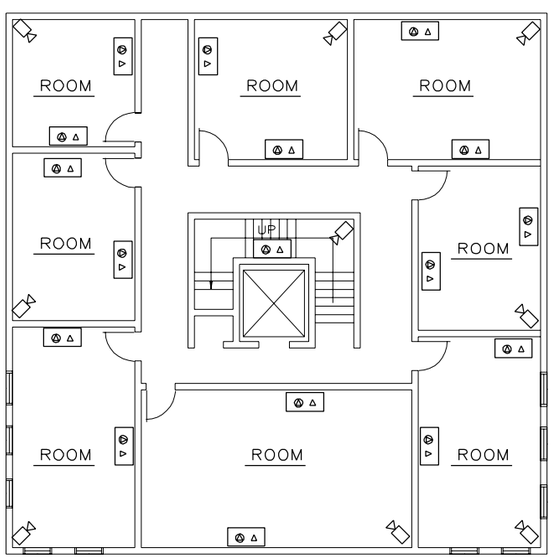
SECOND & THIRD FLOOR PLAN

SCALE: 1:50



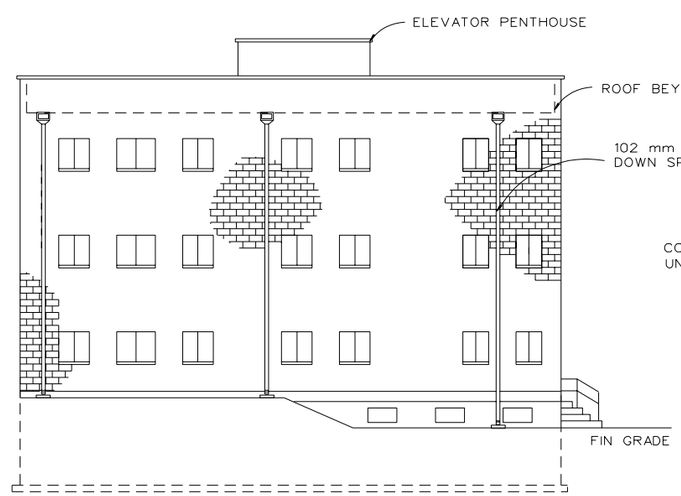
ELEVATION A

SCALE: 1:50



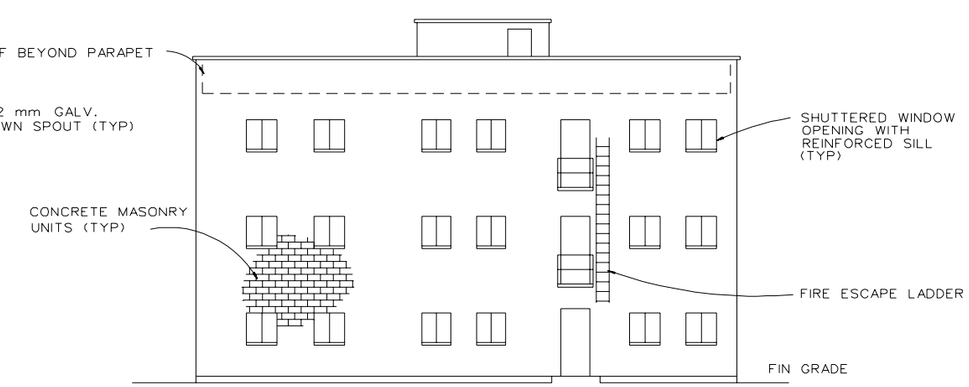
BASEMENT PLAN

SCALE: 1:50



ELEVATION B

SCALE: 1:50



ELEVATION C

SCALE: 1:50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved

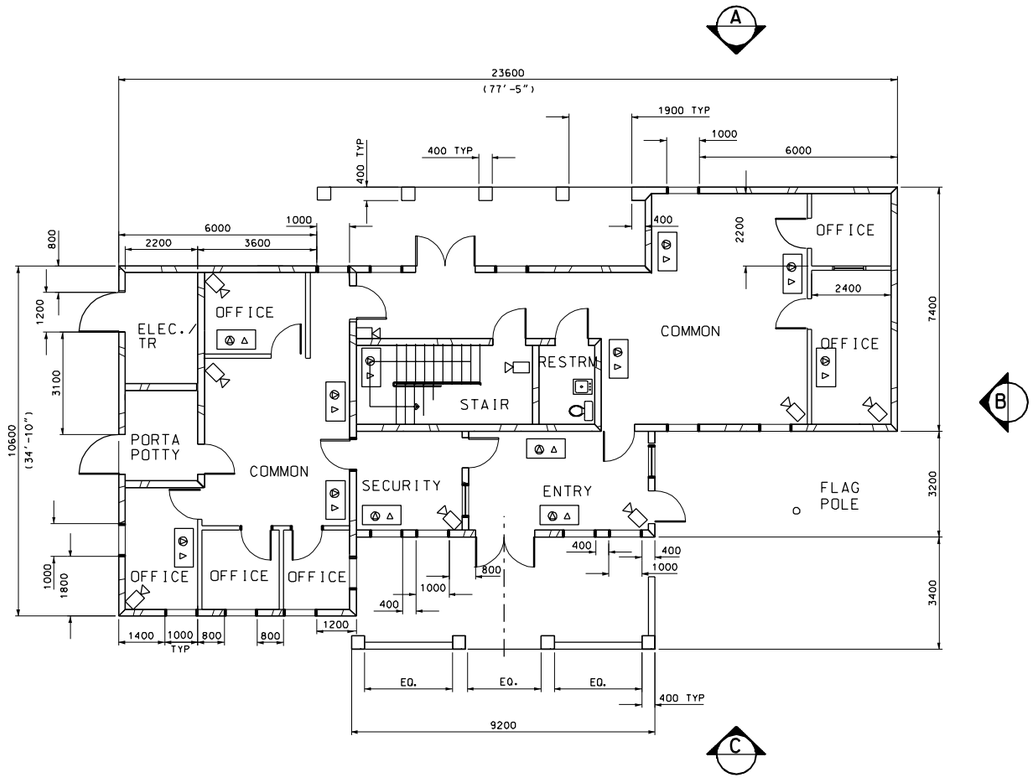
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

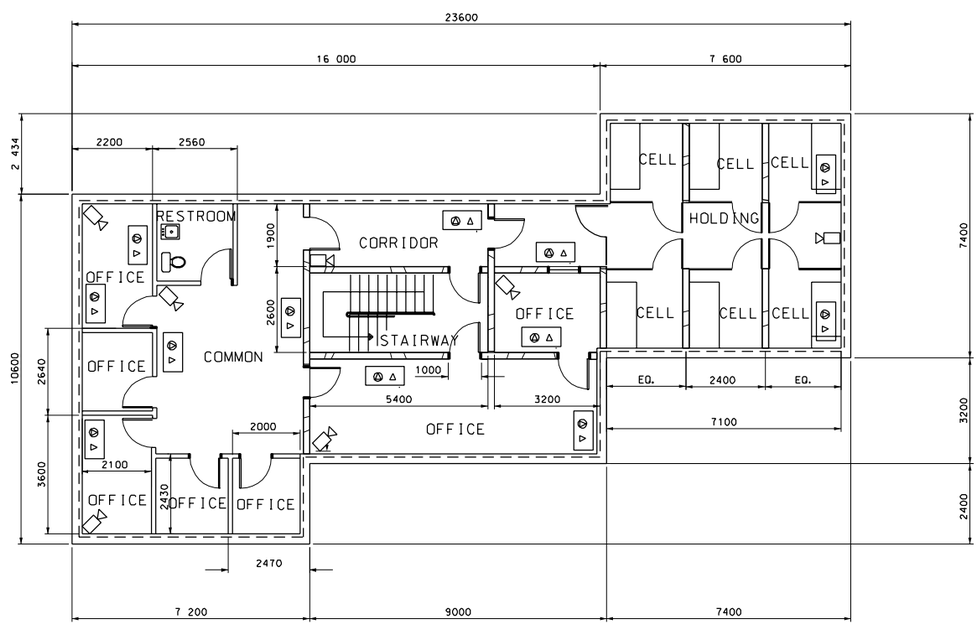
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

COLLECTIVE TRAINING FACILITY
3 STORY HOTEL
PLANS AND ELEVATIONS

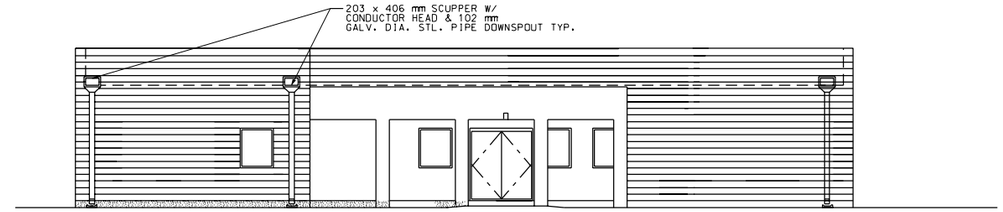
Sheet reference number:
CTF-08



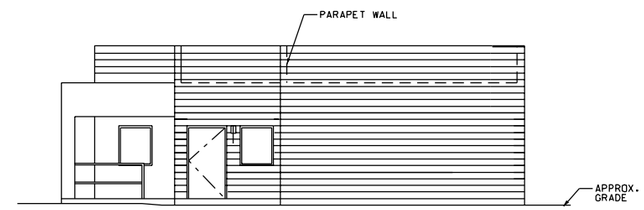
FIRST FLOOR PLAN
SCALE 1:50



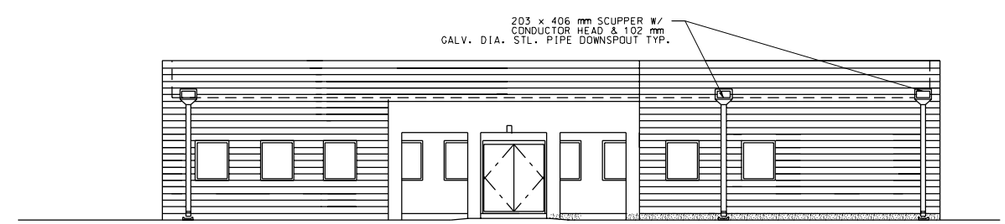
BASEMENT FLOOR PLAN
SCALE 1:50



ELEVATION A
SCALE 1:50



ELEVATION B
SCALE 1:50



ELEVATION C
SCALE 1:50

1:50 2000 1000 0 2000 4000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved
Rev. *			

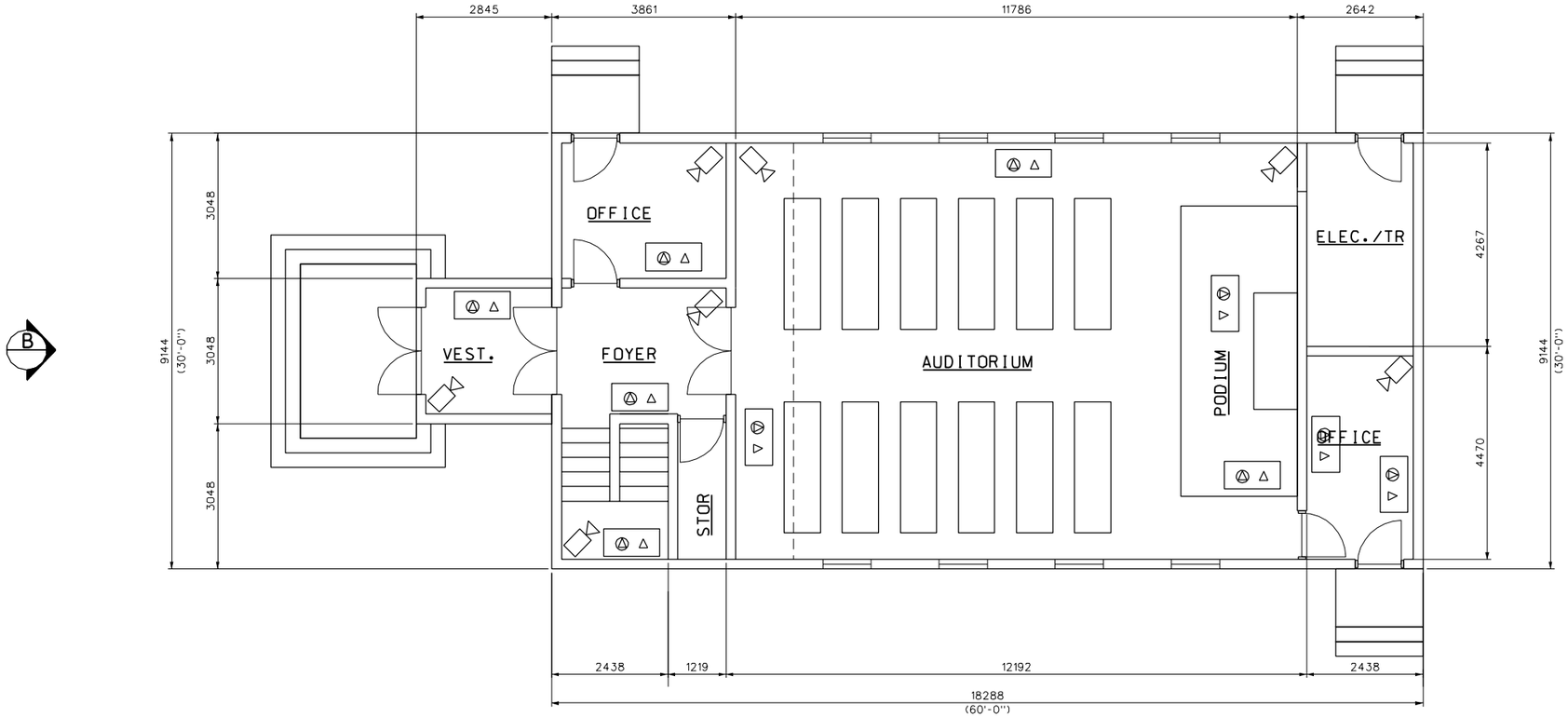
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing no.
File name:
Plot date:
Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

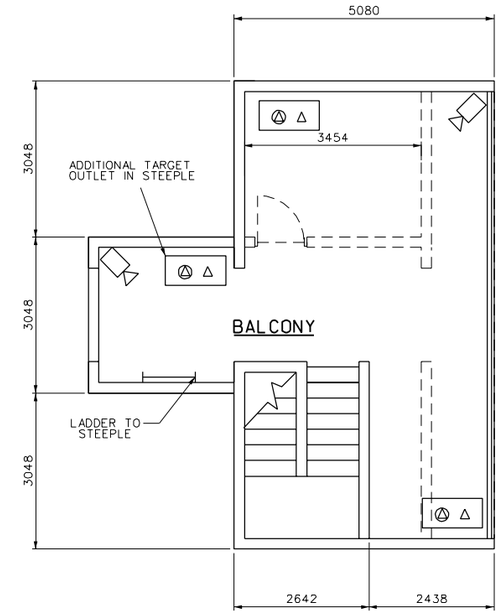
COLLECTIVE TRAINING FACILITY
POLICE STATION/JAIL
PLANS AND ELEVATIONS

Sheet reference number:
CTF-09



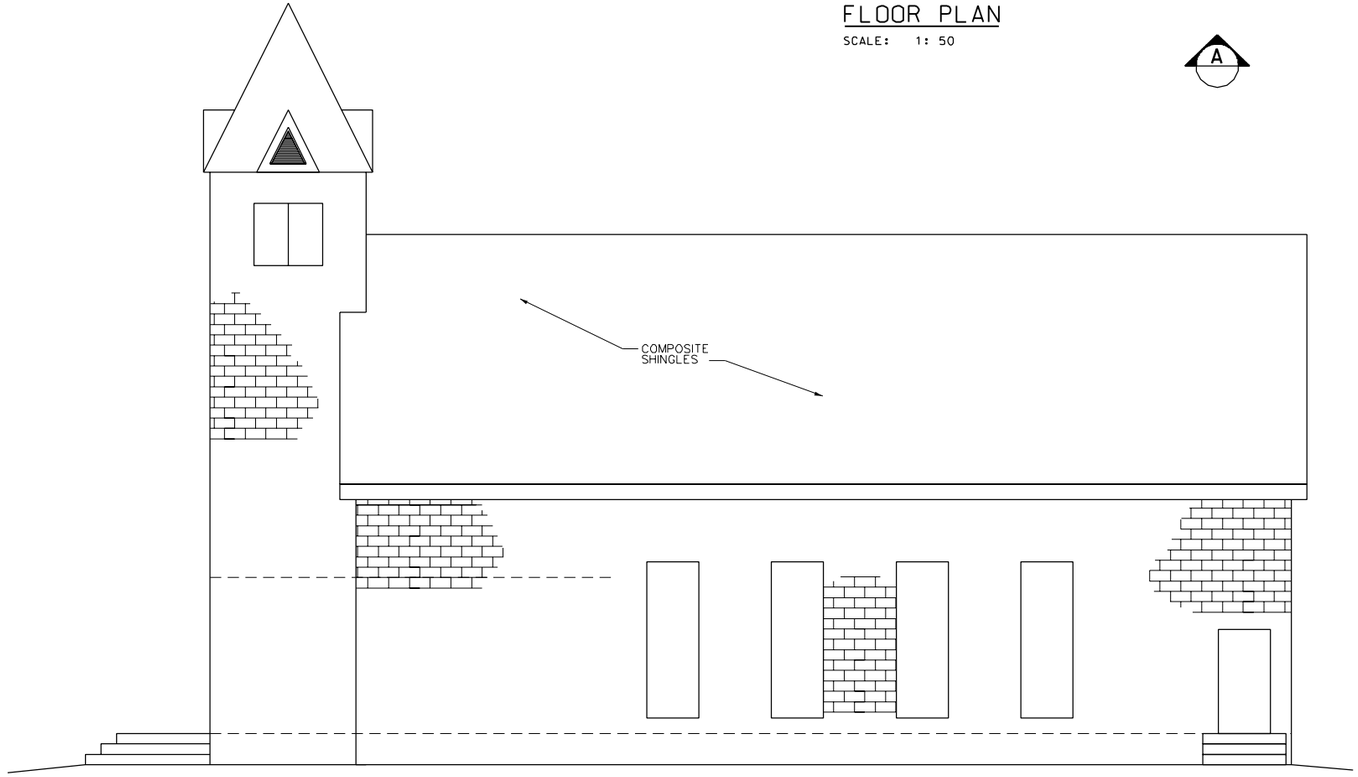
FLOOR PLAN

SCALE: 1: 50



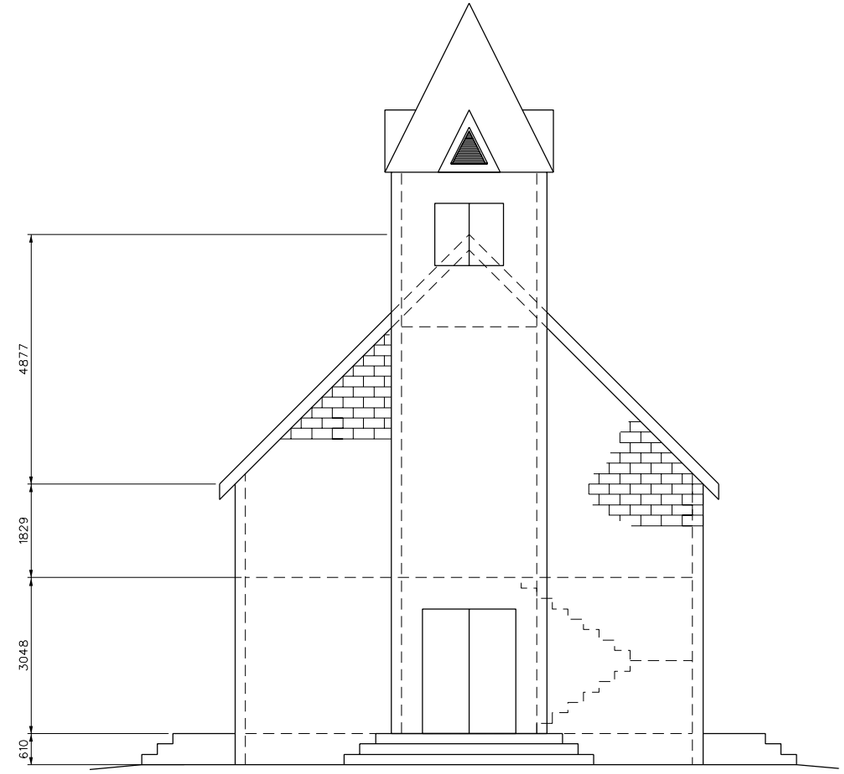
BALCONY PLAN

SCALE: 1: 50



ELEVATION A

SCALE: 1: 50



ELEVATION B

SCALE: 1: 50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved

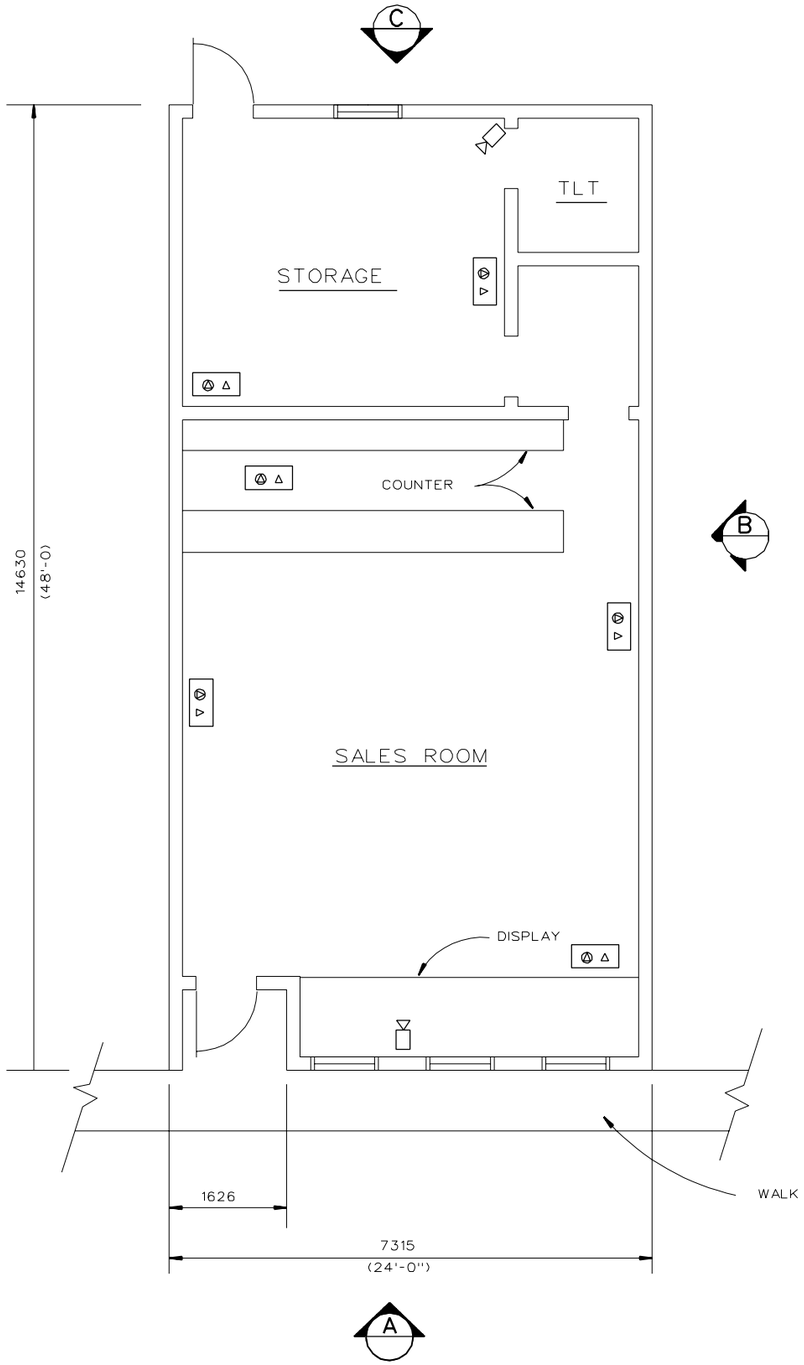
Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

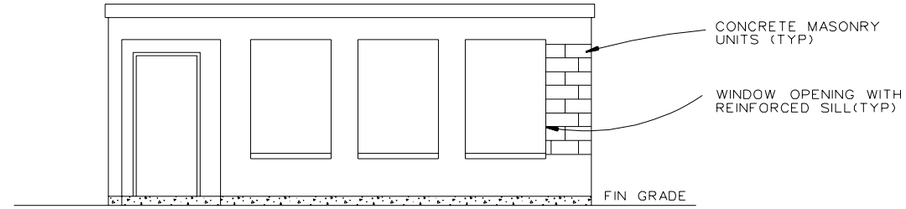
COLLECTIVE TRAINING FACILITY
CHURCH
PLANS AND ELEVATIONS

Sheet reference number:
CTF-10



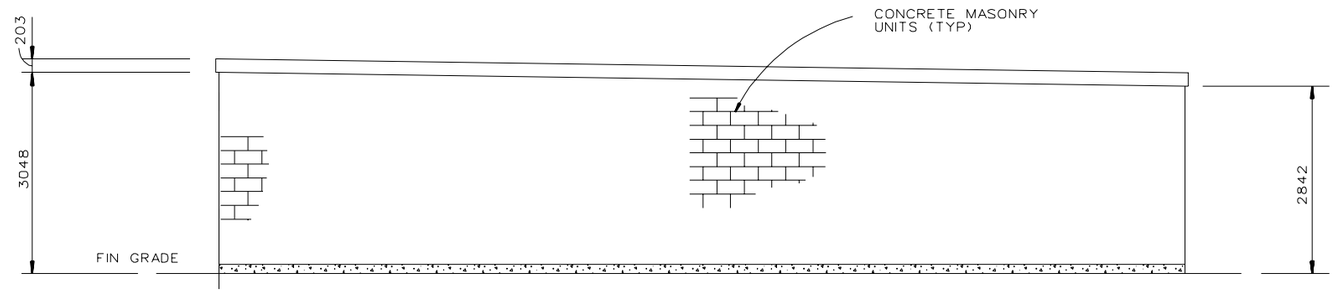
FLOOR PLAN

SCALE: N.T.S



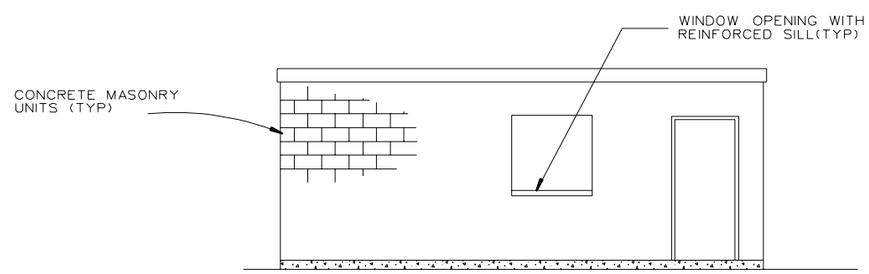
ELEVATION A

SCALE : N.T.S



ELEVATION B

SCALE : N.T.S



ELEVATION C

SCALE : N.T.S

US Army Corps of Engineers

Rev.	Description	Date	Approved

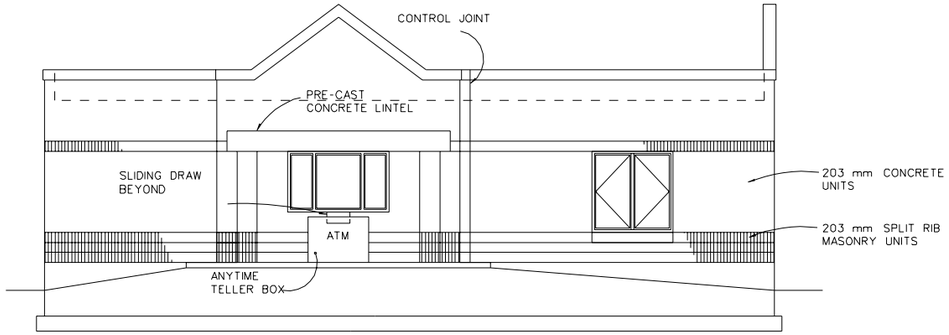
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Design file no.
Drawing code: STD 179-23-01
File name: STDA41.DGN
Plot date:
Plot scale:
Rev.

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

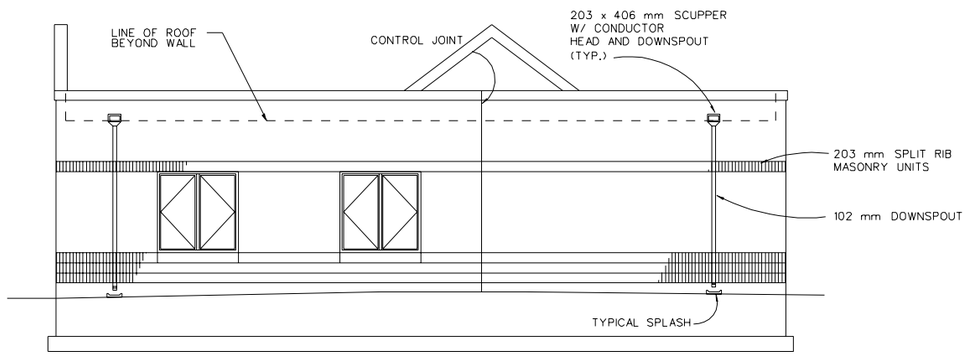
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

COLLECTIVE TRAINING FACILITY
1 STORY BUSINESS
PLANS AND ELEVATIONS

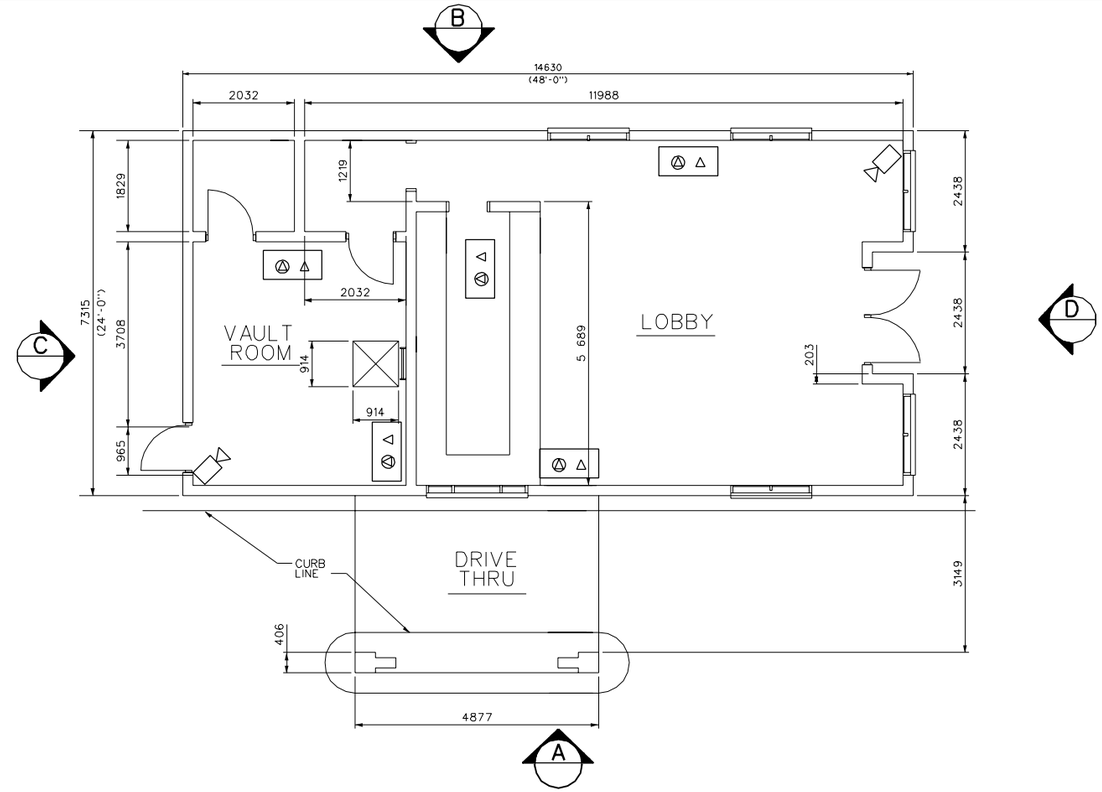
Sheet reference number:
CTF-11



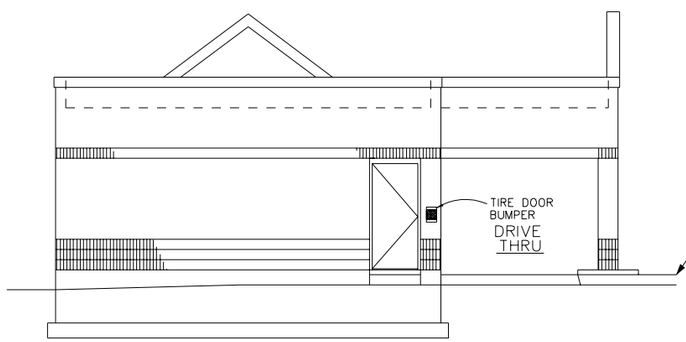
ELEVATION A
SCALE: 1:50



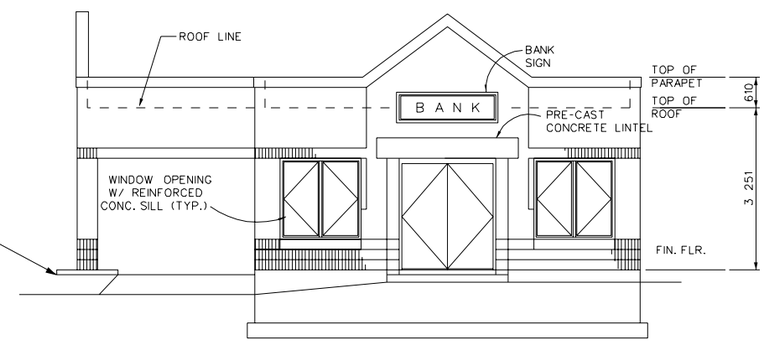
ELEVATION B
SCALE: 1:50



FLOOR PLAN B
SCALE: 1:50



ELEVATION C
SCALE: 1:50



ELEVATION D
SCALE: 1:50

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

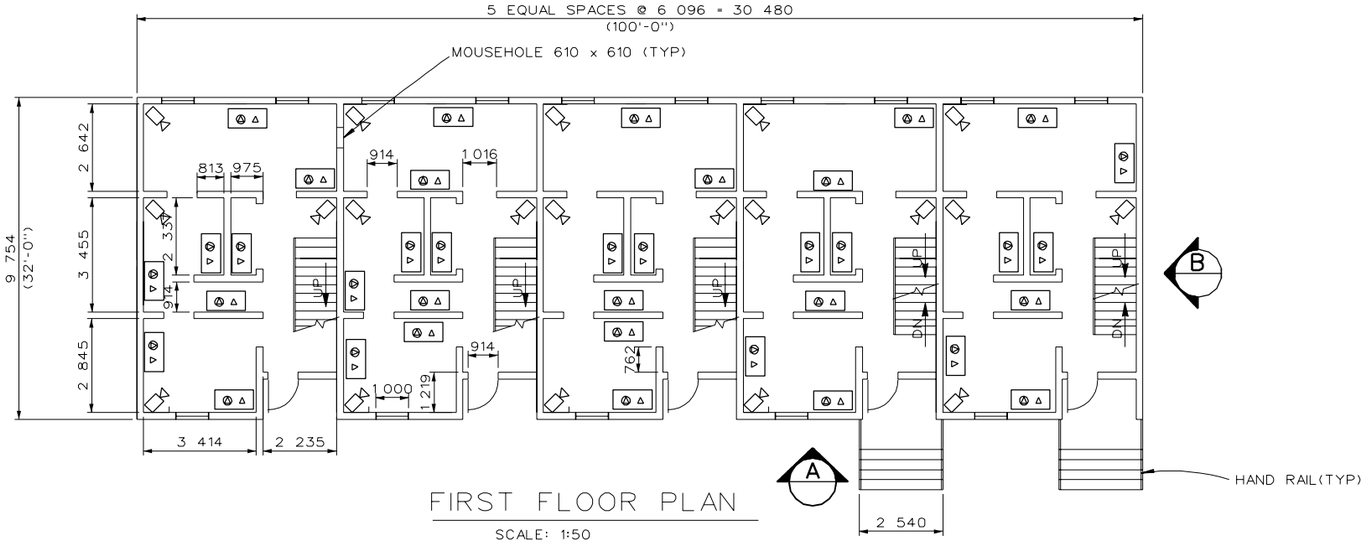
Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

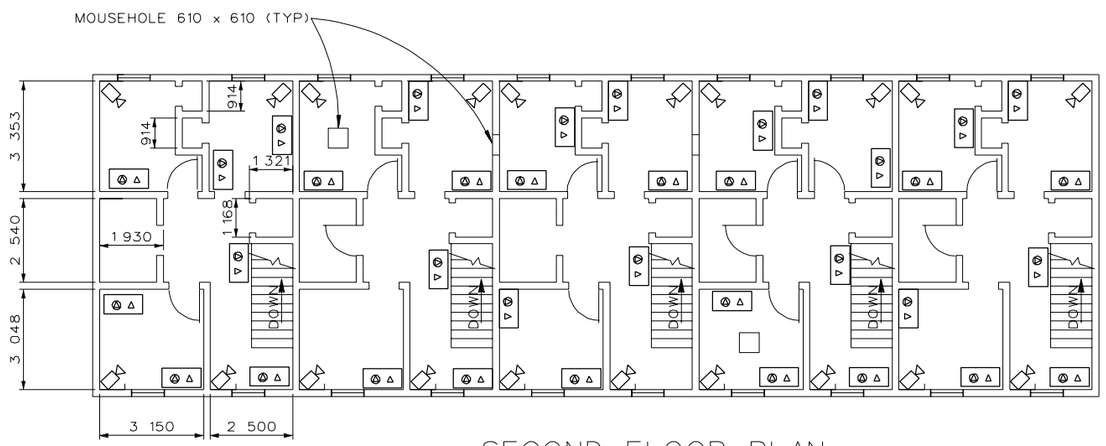
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
COLLECTIVE TRAINING FACILITY
BANK
PLANS AND ELEVATIONS

Sheet reference number:
CTF-12



FIRST FLOOR PLAN

SCALE: 1:50

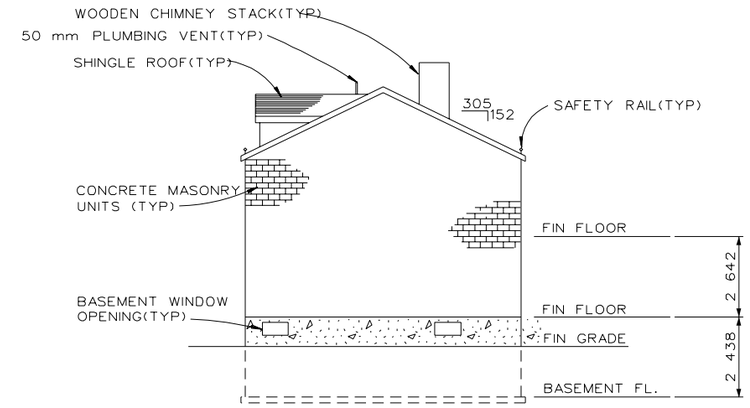


SECOND FLOOR PLAN

SCALE: 1:50

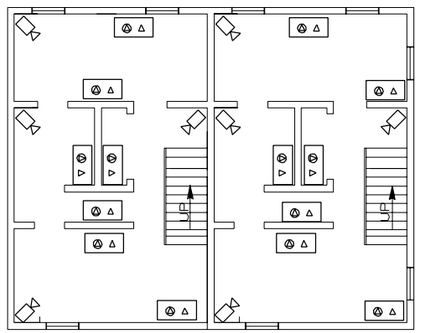
ELEVATION A

SCALE: 1:50



ELEVATION B

SCALE: 1:50



BASEMENT PLAN

1:50 1000 500 0 1000 2000

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

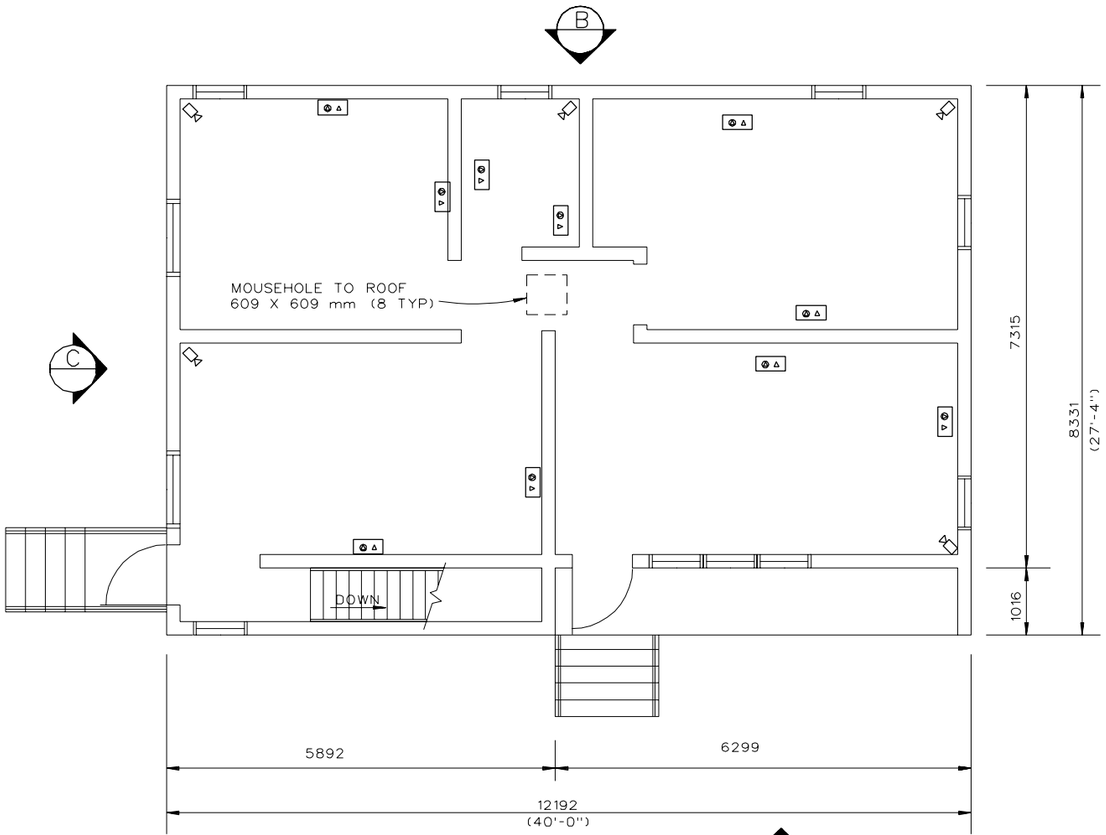
Rev.	Description	Date	Approved

Designed by: Date: Rev.
Dwn by: Ckd by: Design file no.
Reviewed by: Drawing code:
Submitted by: File name: Plot order: Plot scale:

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

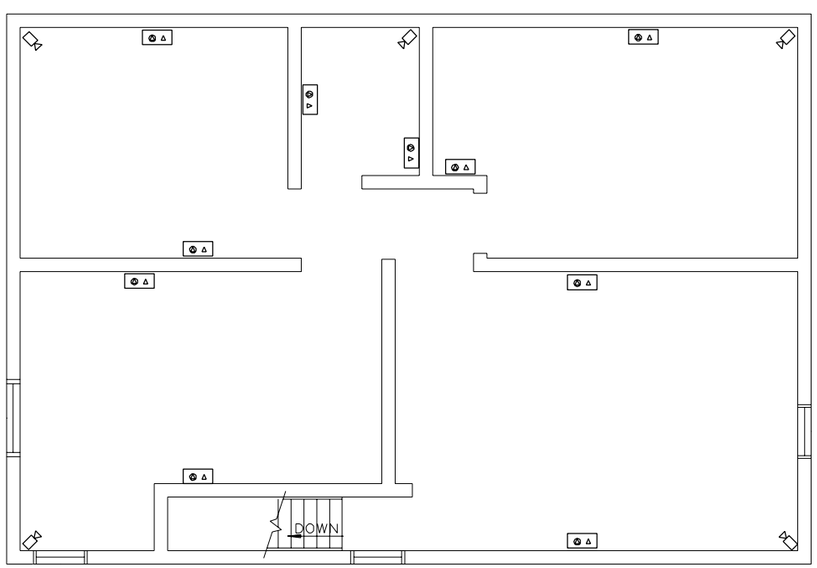
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
COLLECTIVE TRAINING FACILITY
TOWNHOUSE
PLANS AND ELEVATIONS

Sheet reference number:
CTF-13



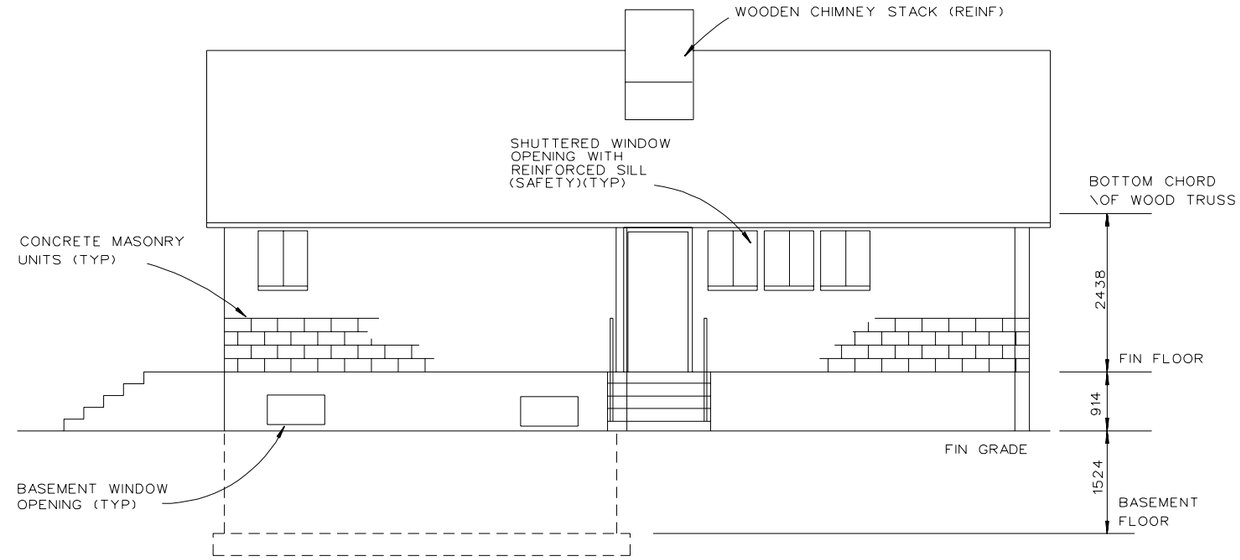
FLOOR PLAN

SCALE: N.T.S



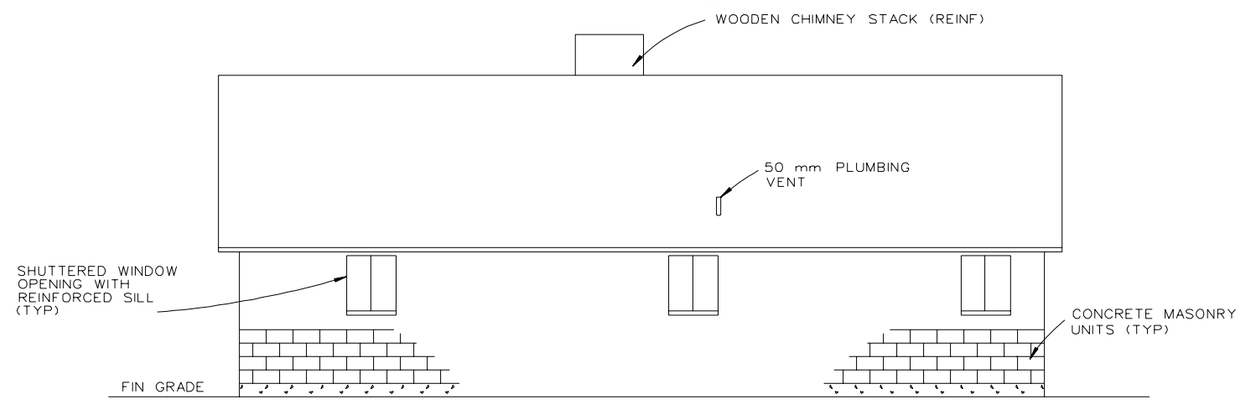
BASEMENT PLAN

SCALE: N.T.S



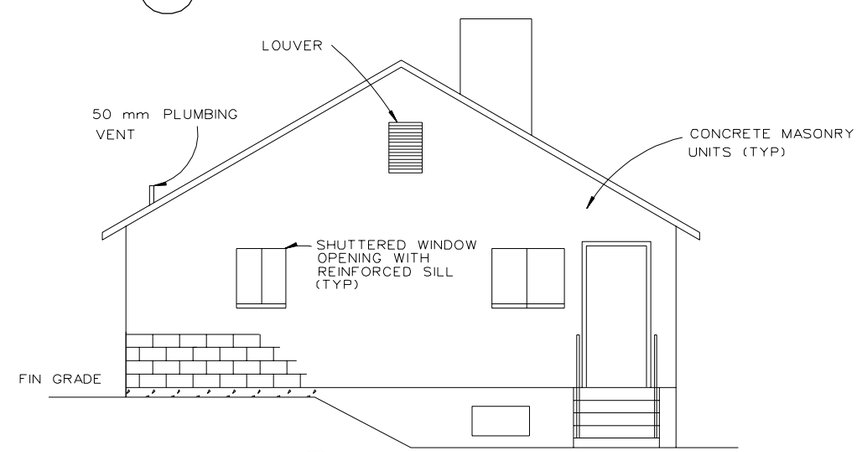
ELEVATION A

SCALE : N.T.S



ELEVATION B

SCALE : N.T.S



ELEVATION C

SCALE : N.T.S

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: Date: Rev.

Dwn by: Ckd by: Design file no.

Reviewed by: Drawing code: STD 173-213-01

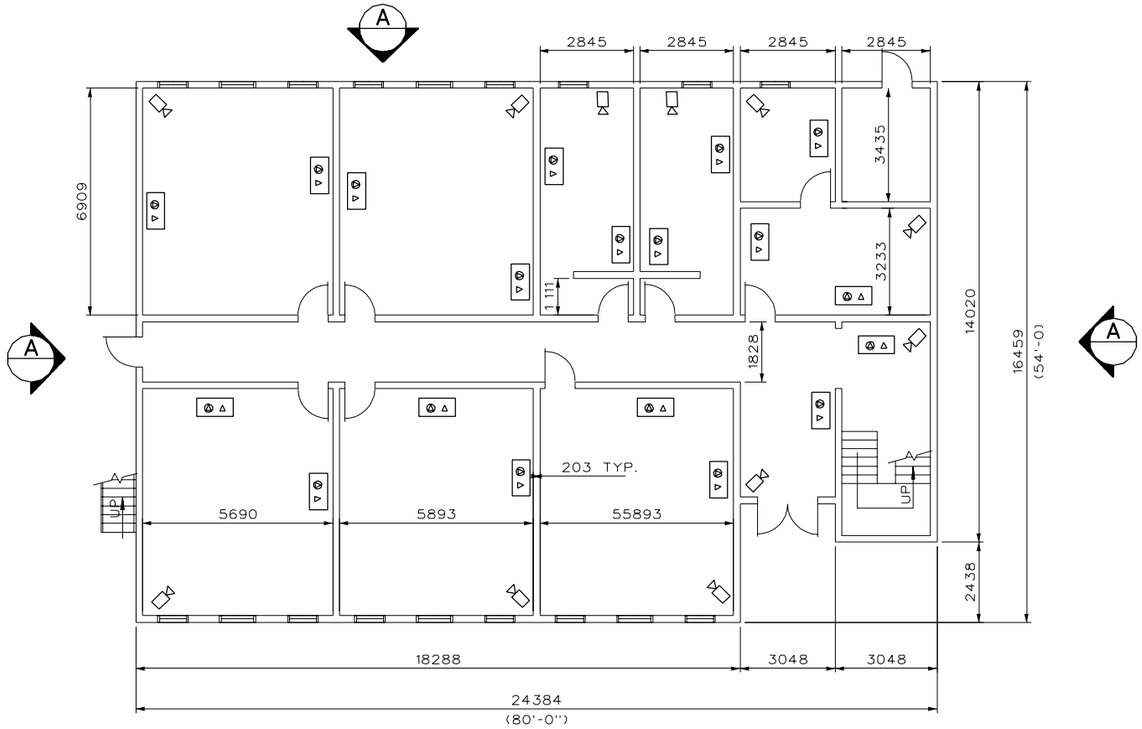
Submitted by: File name: STDA35.DGN Plot date: Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
COLLECTIVE TRAINING FACILITY
RESIDENCE
PLANS AND ELEVATIONS

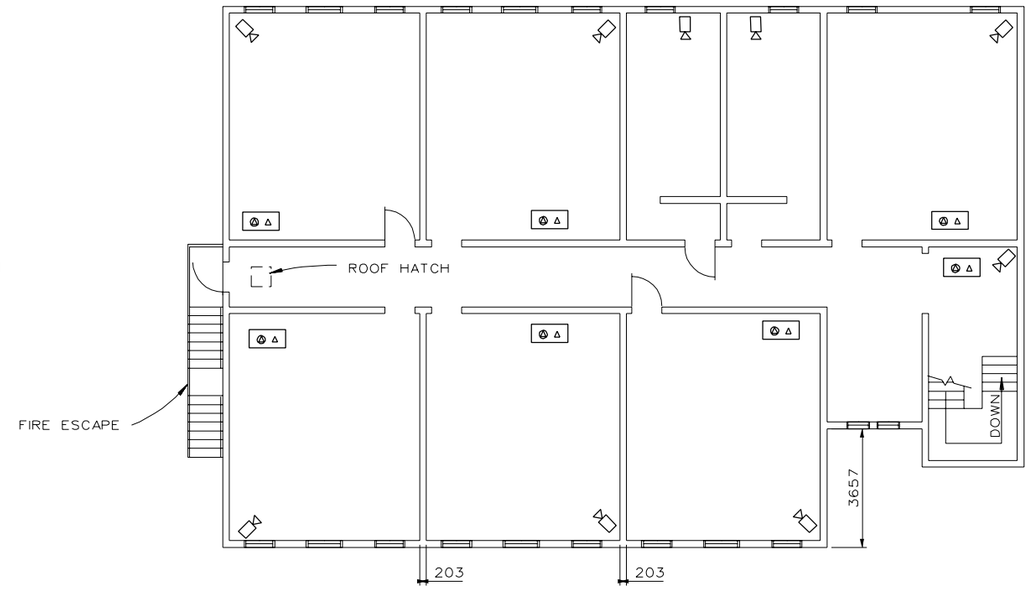
Sheet reference number:

CTF-14



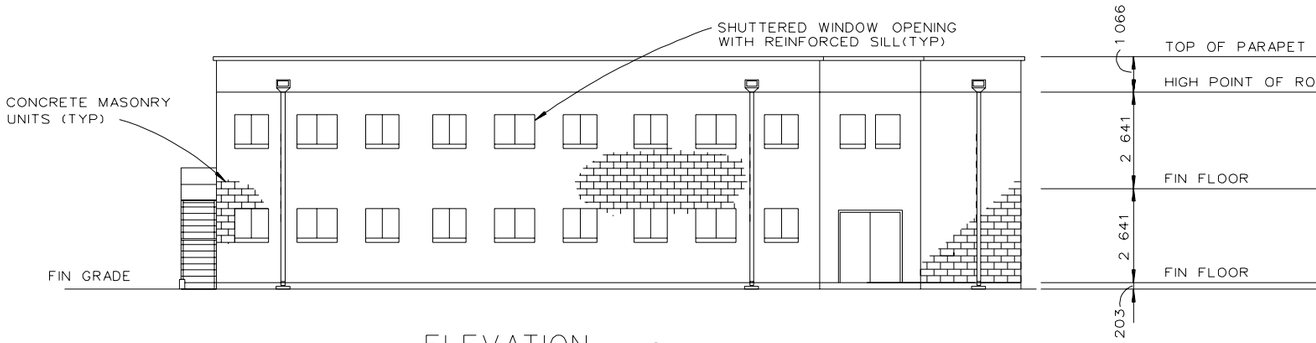
FIRST FLOOR PLAN

SCALE: N.T.S.



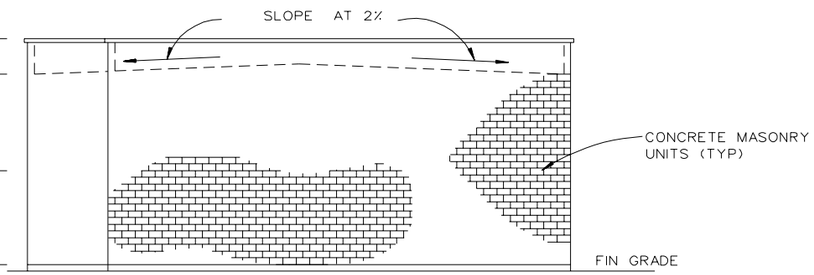
SECOND FLOOR PLAN

SCALE: N.T.S.



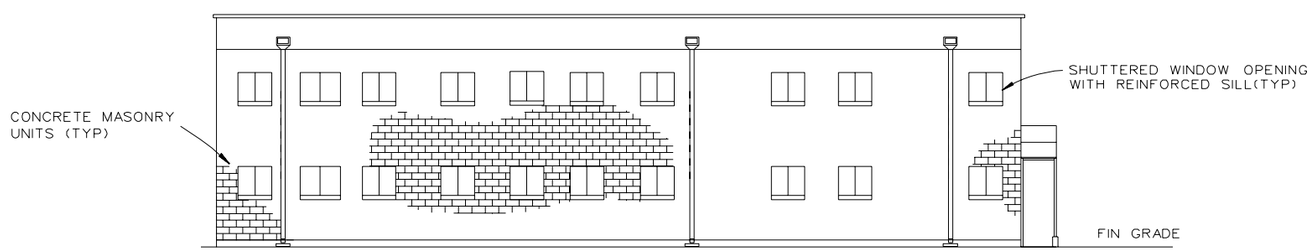
ELEVATION A

SCALE: 1:50



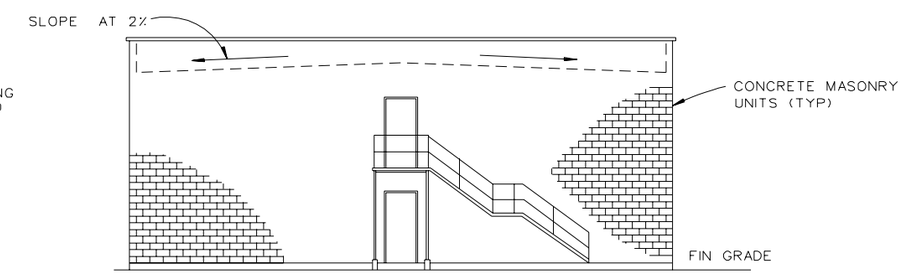
ELEVATION B

SCALE: 1:50



ELEVATION C

SCALE: 1:50



ELEVATION D

SCALE: 1:50

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

US Army Corps of Engineers

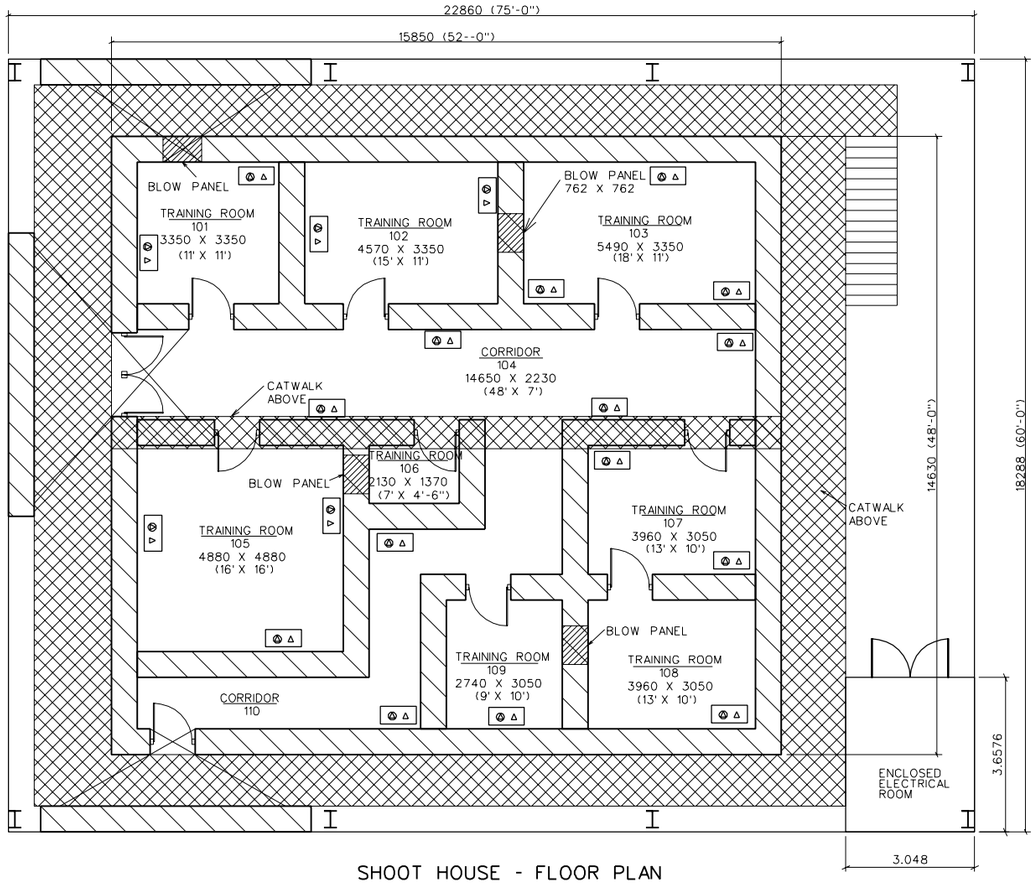
Rev #	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code: STD 179-23-01
Submitted by: | File name: STDA33.DGN Plot date: Plot scale:

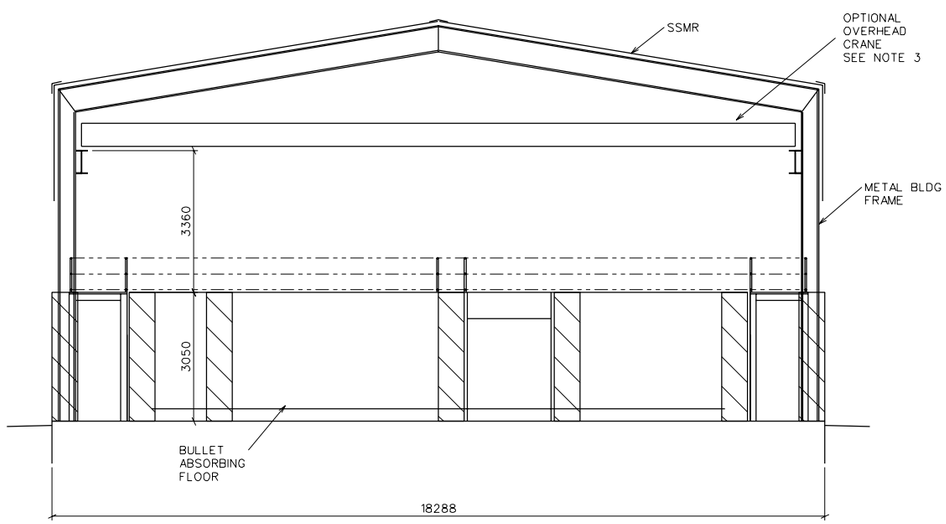
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL
COLLECTIVE TRAINING FACILITY
SCHOOL
PLANS AND ELEVATIONS

Sheet reference number:
CTF-15



SHOOT HOUSE - FLOOR PLAN



BUILDING SECTION

NOTES

1. Bullet absorbing wall may be SACON, sand filled wall section or other commercial product designed to stop and contain rounds and ricochets.
2. Bullet traps should be used behind targets to reduce the number of rounds impacting the walls.
3. Bullet absorbing wall system must be designed to be replaceable. This may be done using the optional Overhead Crane, by using a mobile crane with a removable roof system, or some other method.
4. Target Outlet Boxes may be placed on top of the walls or in the floor in a protected enclosure. They must be placed so that a 3 meter cord can reach all areas where targets will be placed.
5. Target and Camera locations must be determined by the trainer based on the tasks required to meet the individual units METL with consideration to the SDZ.
6. The shoot house is not designed for live fragmentation/concussion grenades.
7. The shoot house must be designed to accommodate the types of mechanical and explosive breaching techniques that will be used.
8. The SDZ of the facility is based on the locations of the firing points and targets, the weapon systems used and the ricochet characteristics of the bullet absorbing walls.
9. Electrical room must be climate controlled.

BULLET ABSORBING WALL PANEL
SEE NOTE 1

CATWALK

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

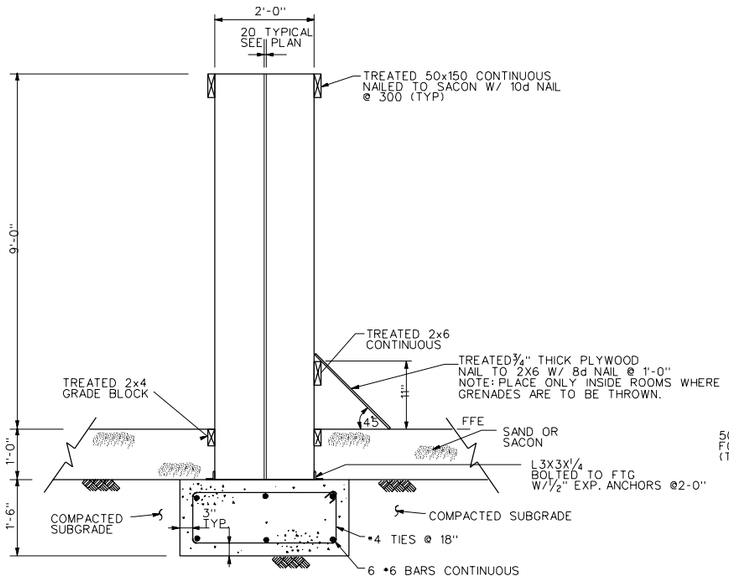
Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by:
Date:
Rev.
Design file no.
Drawing code:
File name:
Pay code:
Plot scale:

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

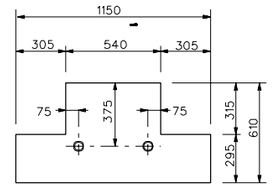
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

SHOOT HOUSE
FLOOR PLAN

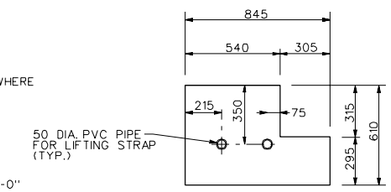
Sheet reference number:
SHH- 1



SACON WALL SECTION

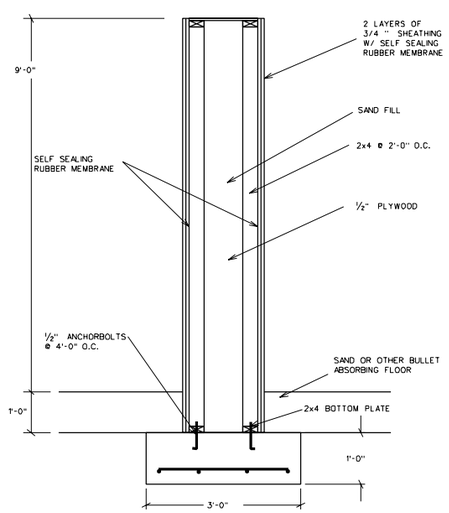


SACON PANEL SECTION - TYPE A

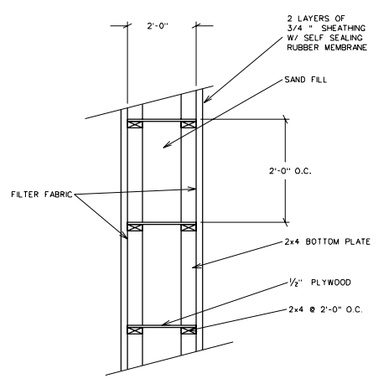


SACON PANEL SECTION - TYPE B

SACON WALL DETAILS



SECTION VIEW



PLAN VIEW

US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

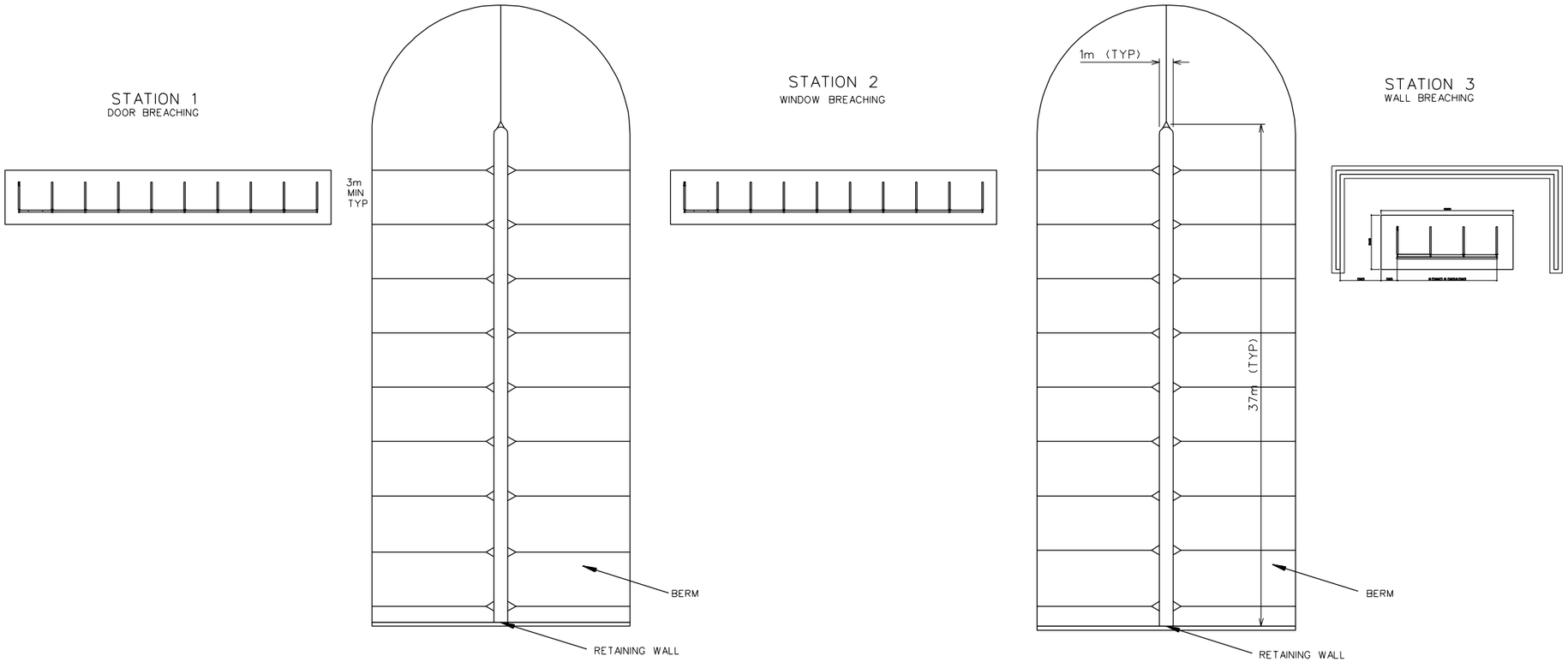
RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

SHOOT HOUSE

FLOOR PLAN

Sheet reference number:

SHH- 1



BREACH FACI:ITY - PLAN VIEW

SCALE : N.T.S.

NOTES:

1. BERMS ARE TO BE 3m HIGH AND 1m WIDE ON TOP
2. SLOPE OF BERMS VARIES DEPENDING UPON SOIL CONDITIONS

US Army Corps of Engineers

Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot date: Plot scale:

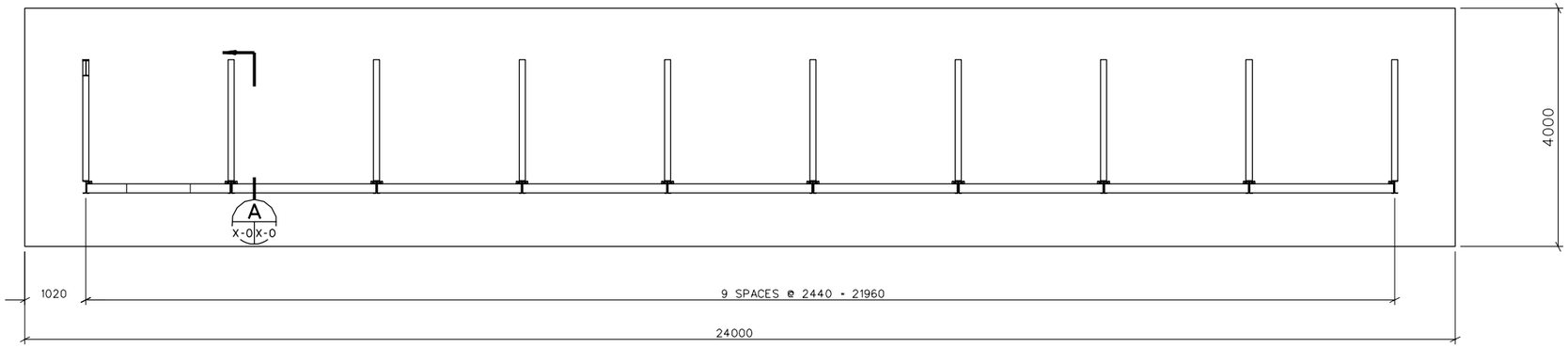
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC• 17904
BREACH FACILITY
SITE LAYOUT

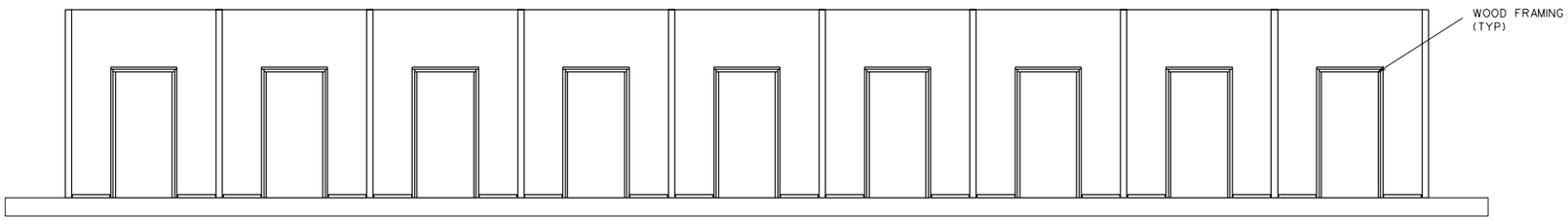
Sheet reference number:
BCH-01

Sheet 1 of



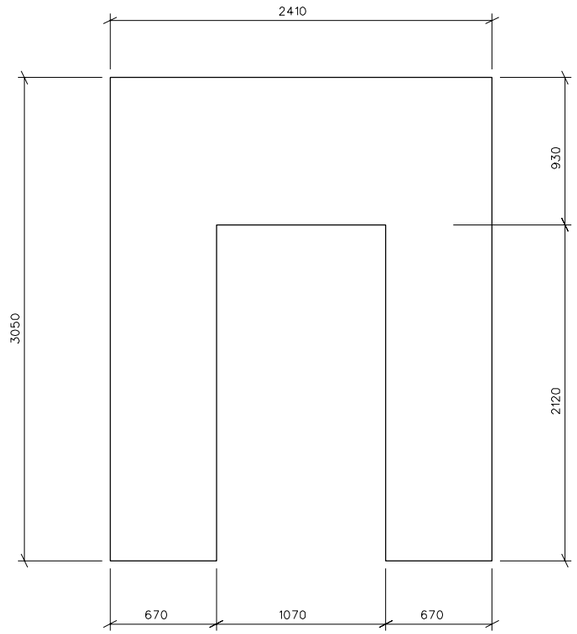
DOOR BREACH - PLAN VIEW

SCALE : 1:50



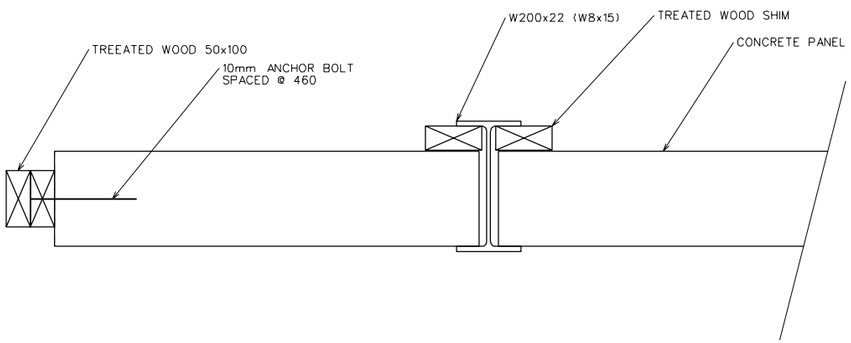
DOOR BREACH - ELEVATION

SCALE : 1:50



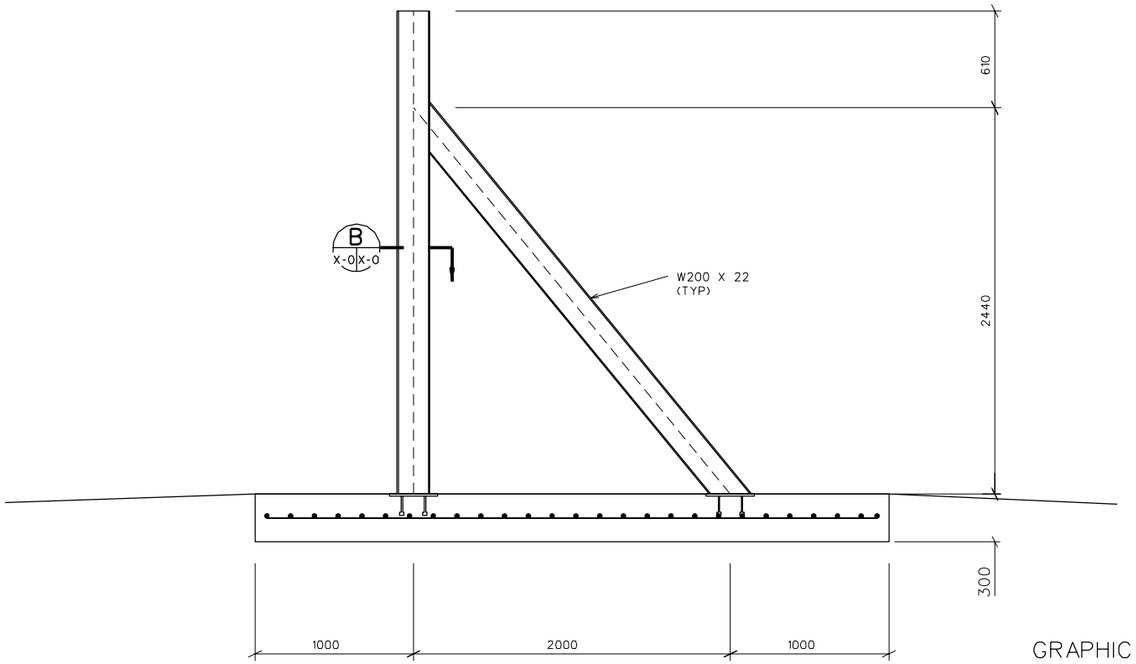
CONCRETE PANEL

SCALE : 1:20



SECTION B

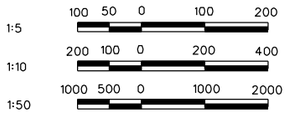
SCALE : 1:10



SECTION A

SCALE : 1:20

GRAPHIC SCALES



US Army Corps of Engineers

Rev.	Description	Date	Approved
*			

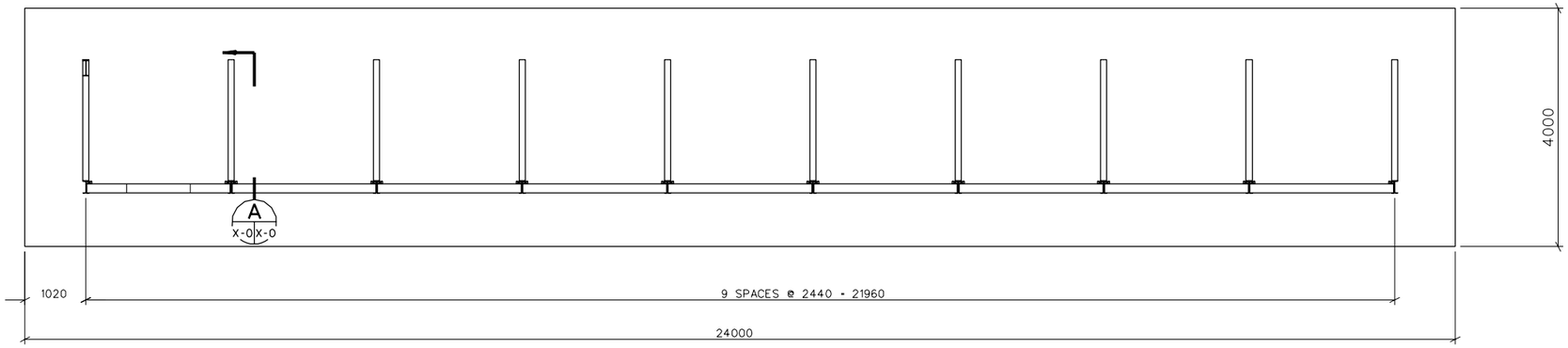
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no. | Drawing code:
Reviewed by: | Submitted by: | File name: | Plot date: | Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

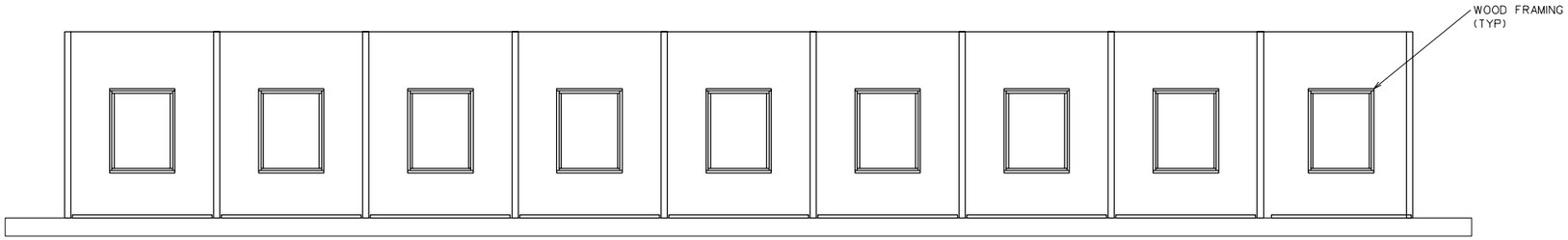
FCC* 17904
BREACH FACILITY
STATION 1 - DOOR BREACH

Sheet reference number:
BCH-02



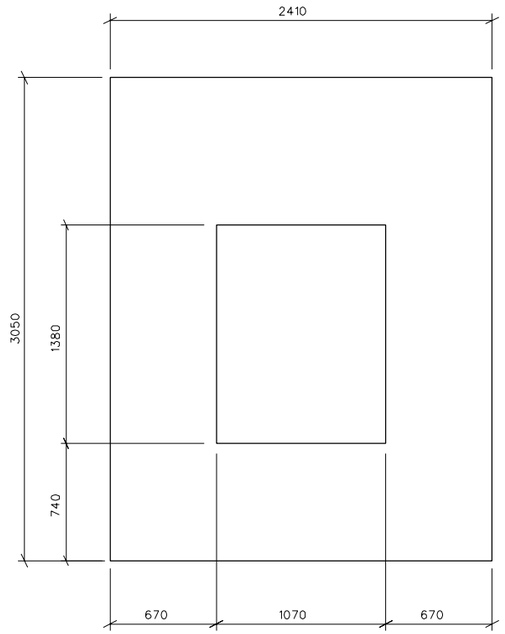
WINDOW BREACH - PLAN VIEW

SCALE : 1:50



WINDOW BREACH - ELEVATION

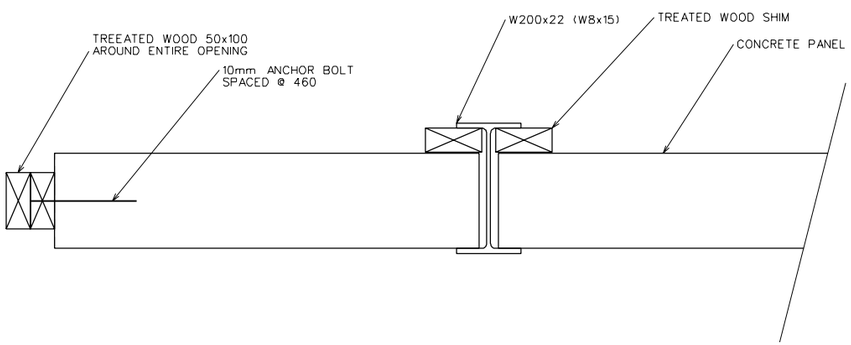
SCALE : 1:50



NOTE: WINDOW BREACH CONCRETE PANEL MAY BE CAST THE SAME AS THE DOOR BREACH THEN FRAMED IN WITH WOOD

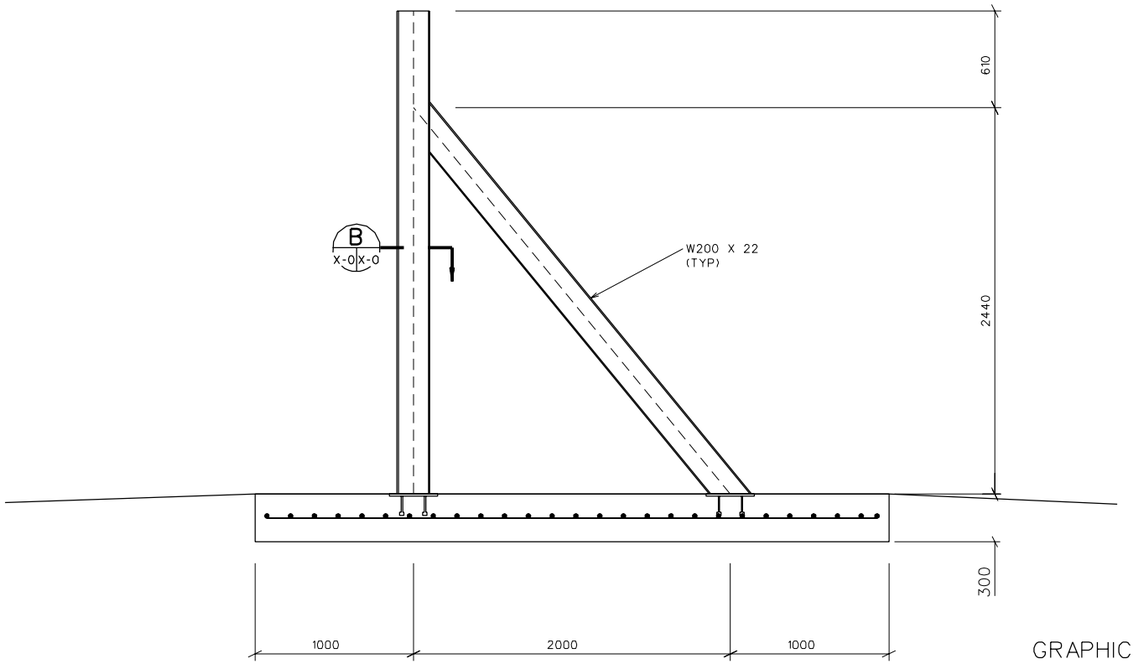
CONCRETE PANEL

SCALE : 1:20



SECTION B

SCALE : 1:10



SECTION A

SCALE : 1:20

GRAPHIC SCALES

1:5 — 100 50 0 100 200

1:10 — 200 100 0 200 400

1:50 — 1000 500 0 1000 2000

US Army Corps of Engineers

Rev.	Description	Date	Approved

Designed by: | Date: | Rev.

Dwn by: | Ckd by: | Design file no.

Reviewed by: | Drawing code:

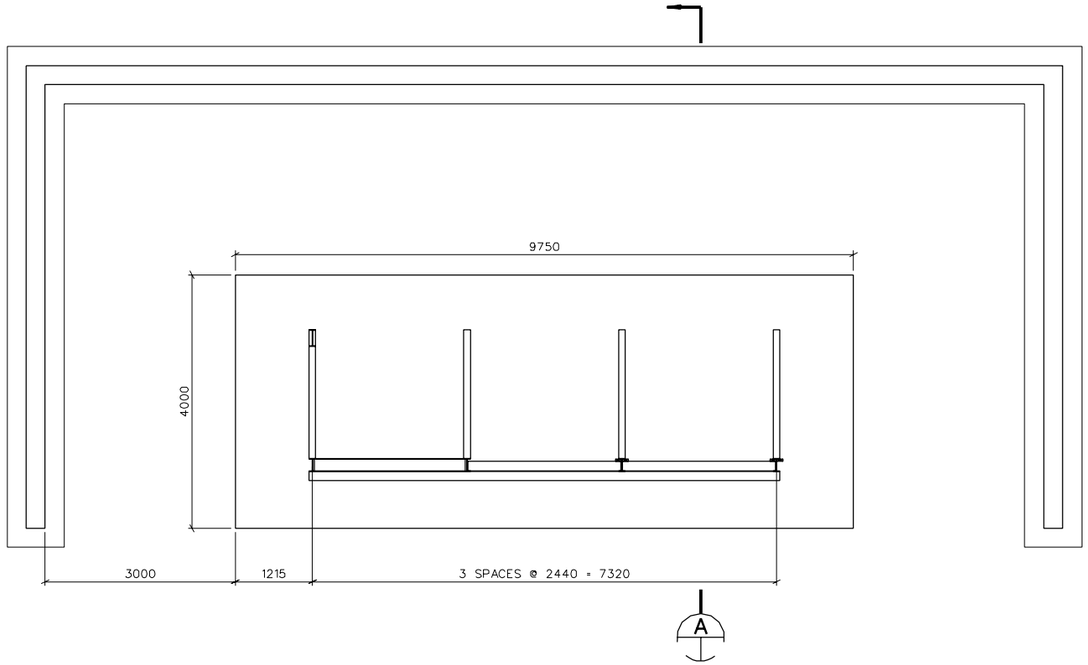
Submitted by: | File name: | Plot date: | Plot scale:

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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

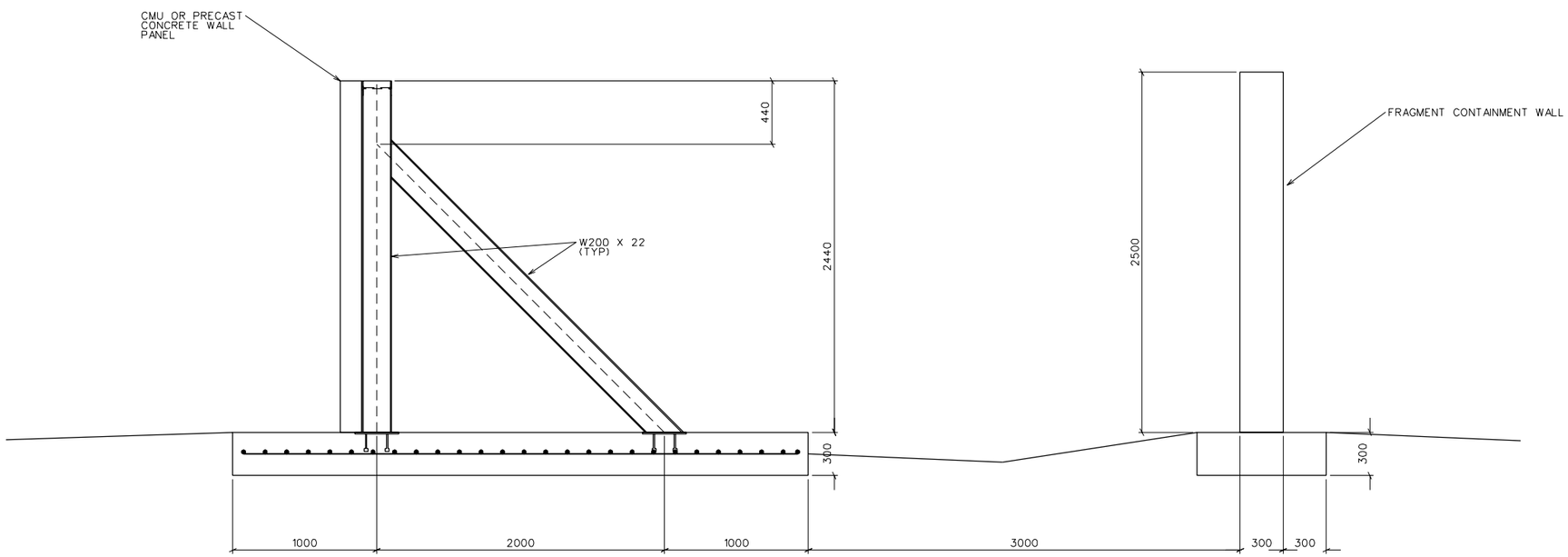
FCC= 17904
BREACH FACILITY
STATION 1 - WINDOW BREACH

Sheet reference number:
BCH-03



DOOR BREACH - PLAN VIEW

SCALE : 1:50



SECTION A

SCALE : 1:20

US Army Corps of Engineers

Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd 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

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

FCC= 17904
BREACH FACILITY
STATION 1 - DOOR BREACH

Sheet reference number:
BCH-04