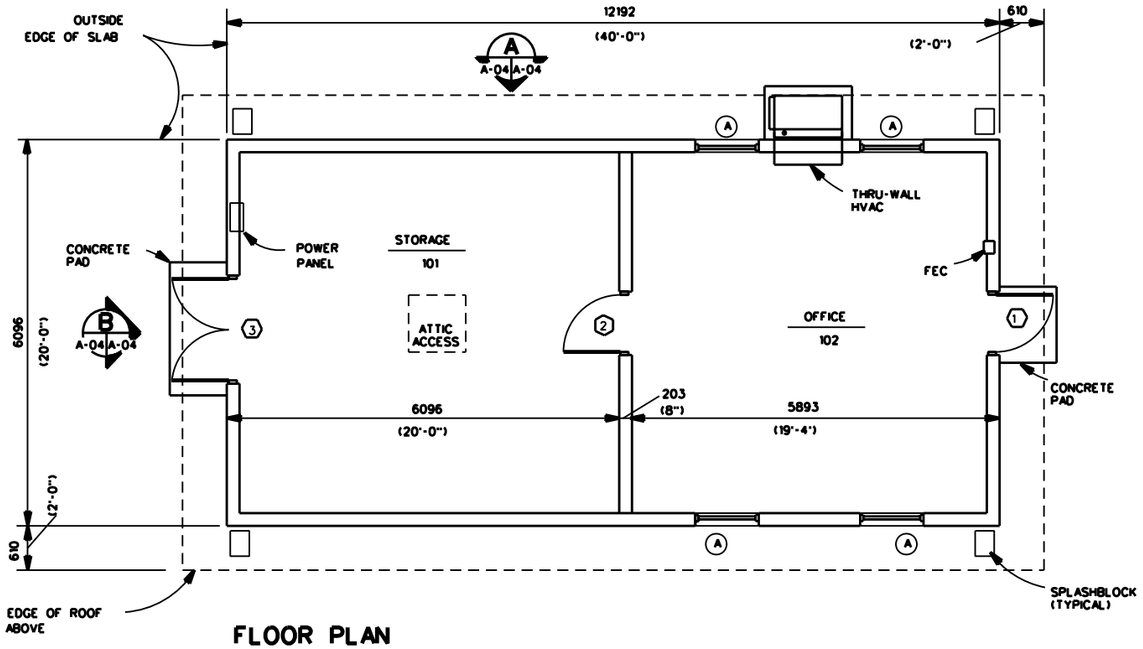
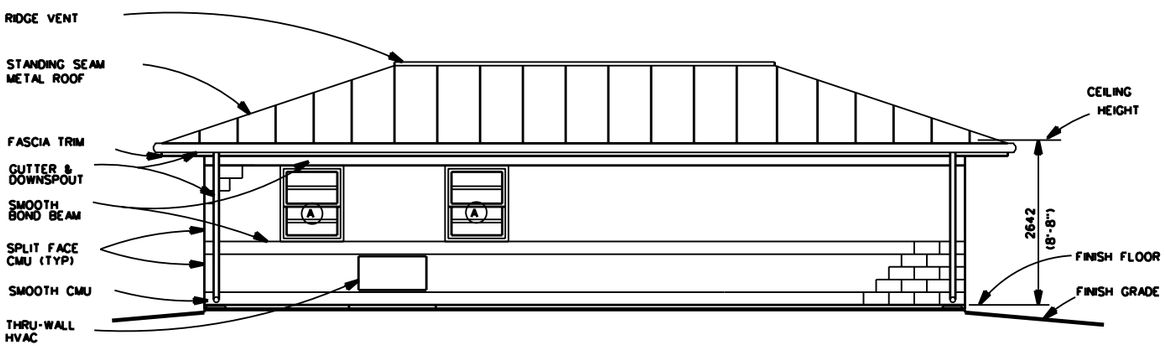


FLOOR PLAN

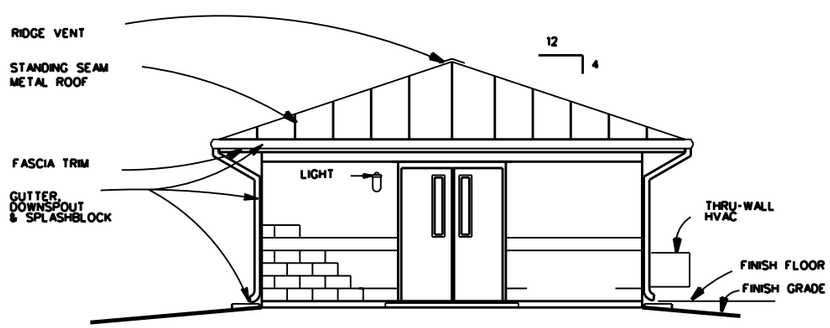
SCALE : 1:100



ELEVATION A

SCALE : 1:100

A-04 A-04



ELEVATION B

SCALE : 1:100

A-04 A-04

GENERAL

The Operations/Storage Building provides office space for range personnel and stores supplies, spare parts and tools. Target maintenance is also accomplished in the facility. The office and storage areas each require 74.32 square meters (800 square feet) for a total of 74.3 square meters (800 square feet). The occupant load factor is 9.3 net sq. meters (100 sq. feet) (per person) based on a business use. See NFPA 101 table 7.3.1.2.

SITE ADAPTATION

This standard definitive design should be adapted to local conditions such as climate, available construction materials and techniques, topography, seismic zone and the existing character of surrounding buildings. These factors may affect plans, elevations and building systems. The building foundation must be designed based on the results of a geotechnical investigation.

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.

FUNCTIONAL REQUIREMENTS

All dimensions not labeled are in millimeters. Windows are double hung to meet functional requirements providing natural lighting and ventilation. Windows have forced entry resistant metal frames and are provided with insect screens. Provide polycarbonate security glazing in windows and doors. Gutters, downspouts and splash blocks should be provided where required by climatic conditions. Provide concrete pad at ground level below A/C unit for ground maintenance. Extend 150 mm (6") beyond edge of unit on three sides. Covered entries and ice guards may be necessary in northern climates. The office area should be provided with a finished ceiling.
The Operations/Storage Building is accessed only by able-bodied personnel and does not require ADA compliance unless dictated by local criteria.

MECHANICAL

The Mechanical Equipment shall be selected and sized based on site requirements, local weather design criteria, available energy sources, and building construction materials. The HVAC system must maintain an equipment operating temperature of 74 F +/- 4 F in rooms containing range communication equipment. Obtain range communication equipment heat release from the User or targetry supplier for HVAC load calculations and equipment sizing. HVAC design for personnel comfort shall be in accordance with UFC 3-410-01FA. U-Factor requirements are based on the local climatic conditions in accordance with TI 800-1.

ELECTRICAL

The Operations/Storage building shall be served by 120/240V, 1 phase, 3-wire secondary power. Rigid Steel conduit shall extend a minimum of 1524mm (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 panelboard shall be 120/240V single phase, mounted inside building. Receptacles shall be general purpose, 120V, 20A Duplex mounted 450mm (18") above the finish floor. All outlets, receptacles, and conduit shall be recess mounted. Provide 120/240V power for the HVAC unit.

Illumination levels will be designed in accordance with IES. Interior lighting shall consist of flourescent lamps at a level of 50 foot-candles in the office area and 30 foot-candles in the storage area. Exterior lighting shall be provided with separate switching located near points of egress.
The emergency electrical system shall comply with NFPA 70 and NFPA 101. Exit signs will be provided in accordance with NFPA 101. Emergency lighting shall be provided to ensure adequate illumination to egress building in the event of a power outage.
Lightning protection is NOT required for this building.

TELEPHONE

Telephone service is not a requirement for range operations. However, service should be provided to the Ops/Stg Building if it is available in the area.

FIRE PROTECTION

Fire Protection is not required per fire codes for this building. Consult local Fire Marshall for compliance with ocal laws.

GRAPHIC SCALES

1:100 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: S1D 171-23-01
Submitted by: File name: S1DMA1.DGN
Plot date:
Plot scale:

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

15 MAY 2007

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

OPERATIONS / STORAGE BUILDING

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A -04