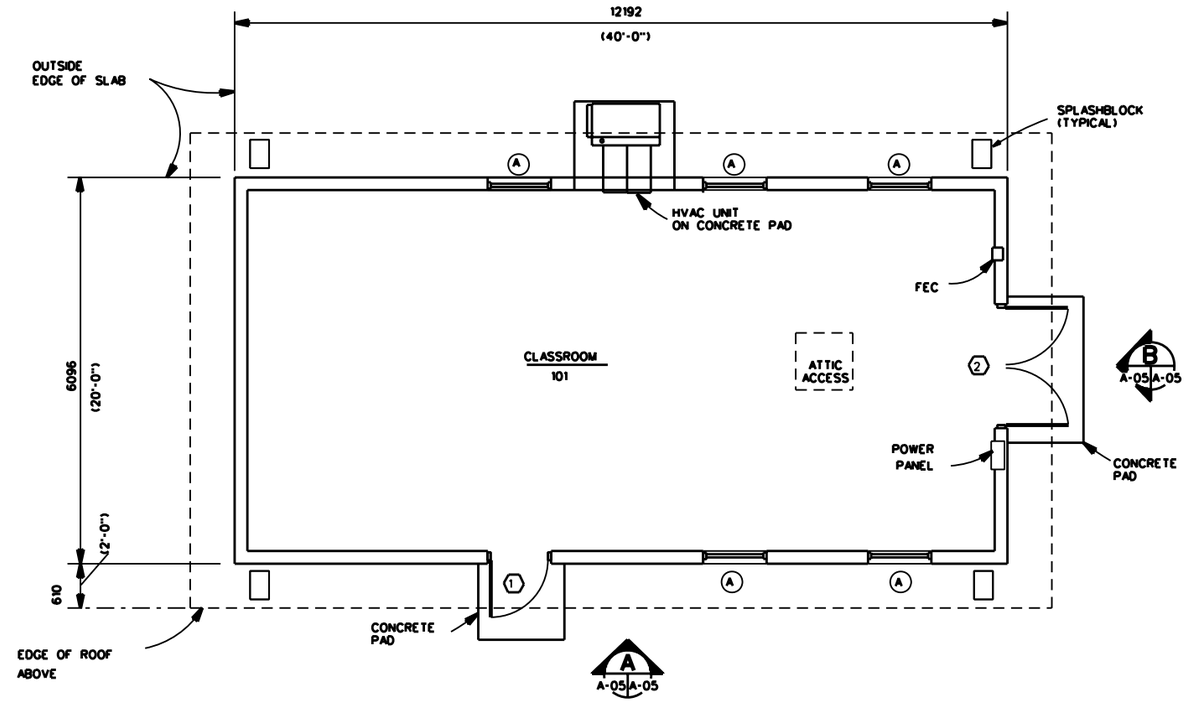

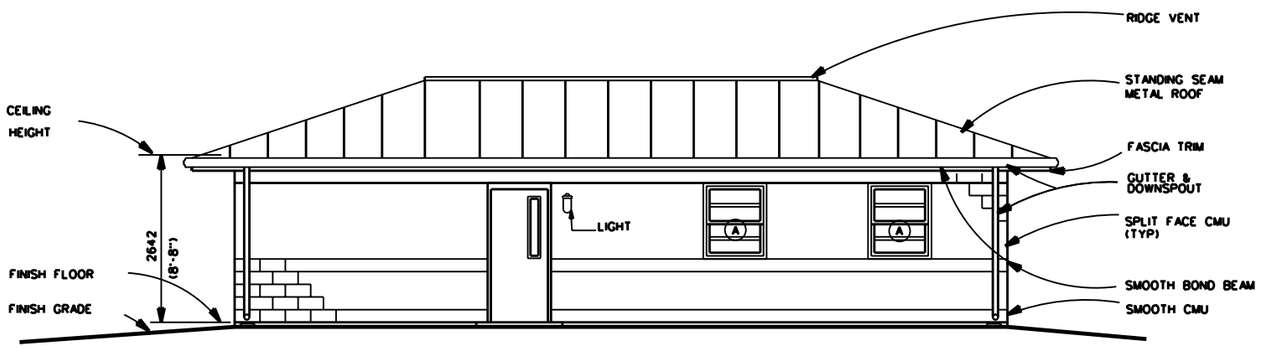

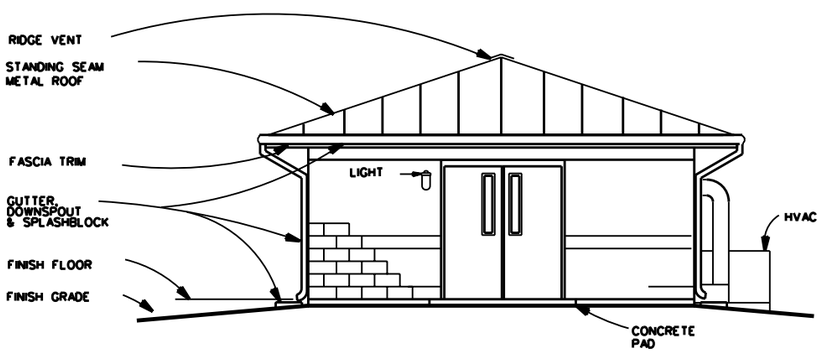

GENERAL

The General Instruction Building is used for troop instruction before and after training exercises. The facility is 74.3 square meters (800 square feet) in area. The building will provide space for 40 desks and approximately 1.2 square meters (12.7 square feet) per person for circulation. The occupant load factor is 1.4 net sq. meters (15 net sq. Feet) per person based on an assembly use, less concentrated, without fixed seating. See NFPA 101 table 7.3.1.2.

SITE ADAPTATION

This standard definitive design should be adapted to local conditions such as climate, topography, seismic zone, available construction materials and techniques 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. Covered entries and ice guards may be necessary in northern climates. Floors should be vinyl tile r sealed concrete for ease of cleaning, ceilings should be finished.
The General Instruction 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 sized in accordance with site requirements, local weather design criteria and the material of building construction. HVAC design for personnel comfort shall be in accordance with UFC 3-410-01FA. Provide concrete pad below HVAC unit. Pad shall extend 6" beyond edge of unit on 3 sides.

ELECTRICAL

The instruction 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 panel board shall be 120/240V single phase, mounted inside building. Receptacles shall be general purpose, 120V, 20A Duplex mounted 450mm (18") above the finished 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 fluorescent lamps at a level of 50 foot-candles. 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.

FIRE PROTECTION

Fire Protection is NOT required per fire codes for this building. Consult local Fire Marshall for compliance with local 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: STD 171-20-01
Submitted by: | File name: STDA02.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

GENERAL INSTRUCTION BUILDING

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