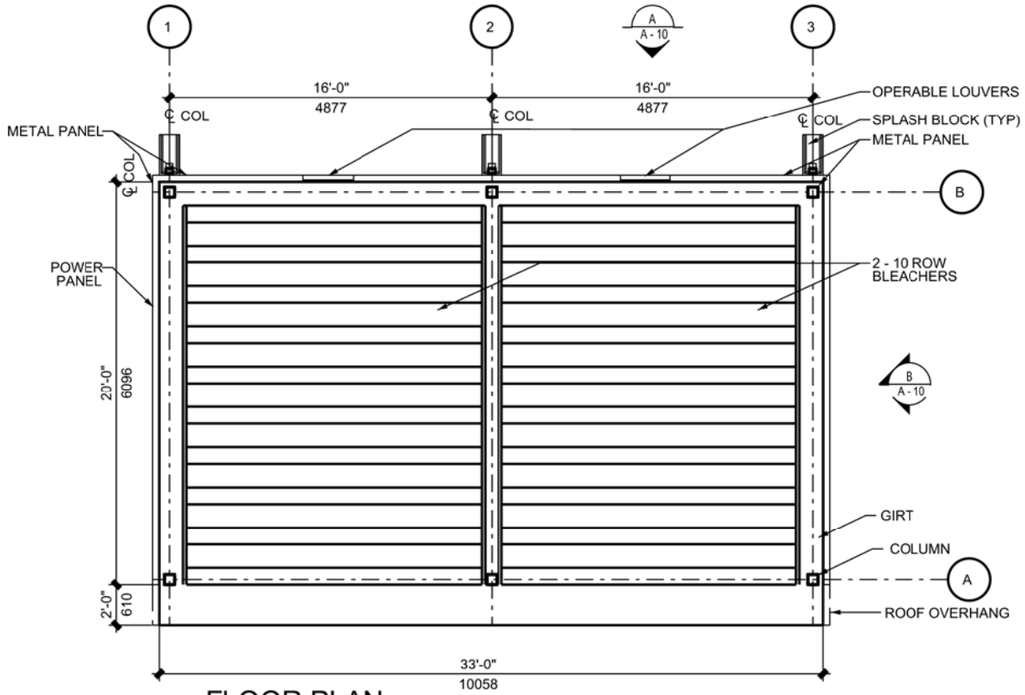


FLOOR PLAN

SCALE: 1/4" = 1'-0"

General

The Bleacher Enclosure provides an area for troop instructions before and after training exercises. The covered facility has a concrete floor and is enclosed on three sides for weather protection. The remaining side is left open to view the firing line and downrange areas. The enclosure is normally programmed with a unit of measure of each (EA), however the size should not exceed what is shown on this drawing. Size Calculation; 33' x 22' equals 726sf (64.4 sm). Two sets of bleachers are installed each having 10 rows and a length of 15 feet (4.6 meters). The bleachers provide seating for 160 troops.
For Service School ranges that require seating for 240 troops, add an additional bay and set of bleachers (see TC25-8 for a list of applicable ranges). The enclosure size becomes 1078 sf (100.1 sm).

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" Departments of the Army regulations, technical manuals, handbooks, standards, and specifications.

Functional Requirements

All dimensions not labeled are mm. Louvers are included to provide natural ventilation. Provide a 2' x 3' access panel in the back wall for access to underside of the bleachers. Gutters, downspouts and splash blocks should be provided where required by climatic conditions. Ice guards may be necessary in northern climates.
The Bleacher Enclosure is accessed only by able-bodied personnel and does not require ADA compliance unless by local criteria.
As an option, sliding barn type doors can be added in the rear wall for added ventilation. All walls may be removed in very warm climates.

Mechanical

No mechanical systems are required for the Bleacher Enclosure.

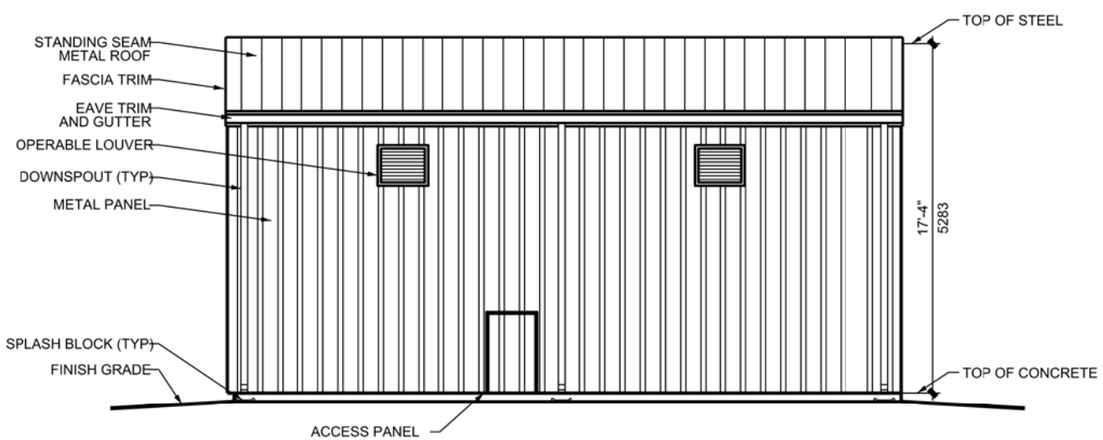
Electrical

The bleacher enclosure shall be served by 120/240V, 1 phase, 3-wire secondary power. Rigid Steel conduit shall extend a minimum of 5' (1524mm) 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. Illumination levels will be designed in accordance with IES. Interior lighting shall consist of white lamps and red lamps for lower level night light. Separate switching shall be provided for white lamps and red lamps.

Provide a mast style lightning protection system for safe cover of personnel. Bleachers shall be bonded to ground.

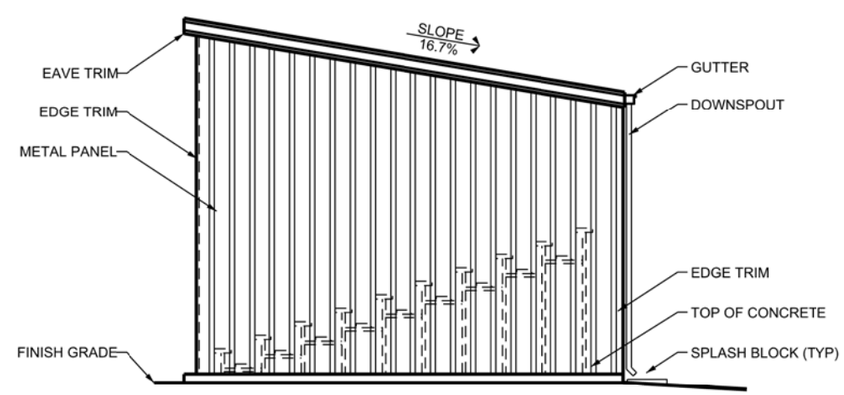
Fire Protection

Fire protection is not required per fire codes for this building. Consult local Fire Marshall for compliance with local requirements. Provide a Mass Notification system per UFC.



A A - 10 ELEVATION

SCALE: 1/4" = 1'-0"



B A - 10 ELEVATION

SCALE: 1/4" = 1'-0"

4' 2' 0 4' 8' 12'

GRAPHIC SCALE: ¼"=1'-0"

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 scale

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

SEPTEMBER 2010

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

BLEACHER ENCLOSURE

Sheet reference number:

A–10