

Category Group 87, Ground Improvement Structures.

Fencing

1.1. **General.** A fence serves as a legal and physical demarcation of a boundary. It is an obstruction which requires jumping, climbing, or cutting through to gain entry. From a security and law enforcement point of view, such actions would be regarded as unauthorized entry. Signs are displayed at appropriate and regular intervals on the exterior boundary of the fence line or on posts immediately adjacent to the exterior boundary, describing the type of area and conditions for entry. This combination of fencing and signs is intended to discourage trespass or unauthorized entry to legal entry points.

1.2. The type of fence installed for any given use depends upon the degree of prevention of unauthorized entry desired. For example, if the security operation requires a continuous surveillance of the fence line, the most substantial barrier available (Type A below) should be utilized. On the other hand, a sturdy multiple strand wire fence serves as an adequate physical and legal barrier along the unwatched boundary of a base area. In every case, use the most economical type of fence that satisfies the need of the security operation. Make all practical use of natural and structural features to reduce the amount of fencing required, provided they constitute an obstruction equal to the barrier of which they are a part.

1.3. Among the factors which affect the selection of the type of security fencing to be used are:

1.4. Permanency of the need;

1.5. Degree of prevention or deterrence of unauthorized entry desired;

1.6. Physical layout of the installation or area and its immediate environs;

1.7. Topography and climate;

1.8. Nearness and nature of adjacent populated or built-up areas;

1.9. Adjacent land use;

1.10. Existing fencing or barriers;

1.11. Degree of military control exercised in the areas immediately adjacent; and

1.12. Local threat assessment, considering both criminal and terrorist threats.

1.13. Determinations and recommendations are made by the installation Resource Protection Executive Committee. See AFI 31-101.

1.14. The majority of requirements for fencing can be satisfied by the types of fences described below, singly or in any combination. Fences and barriers for contingency operations, including base defense, are specified in UFC 4-020-01.

1.15. Type A - Chain link, 50 mm (2 in) square mesh, woven 9 gauge (3.76 mm or 0.148 in) steel wire fabric, 2.1 m (7 ft) high, surmounted by 3 strands of barbed wire, angled outward at 45 degrees for a total height of 2.4 m (8 ft). Typical uses are for nuclear weapon storage areas, aircraft parking areas, areas containing resources of high mission

or monetary value, and as a barrier between flight line activities and cantonment and base or immediately contiguous housing areas. In each instance, except for NATO sites where a coated (metal or vinyl coating) steel wire is used, the steel core is 9 gauge (3.76 mm or 0.148 in), not including the coating. Coated steel wire purchased or installed before January 1, 1980 is considered to meet requirements as long as the core wire is 11 gauge (3.05 mm or 0.1205 in).

1.16. Type A1 - Chain link, 2.1 m (7 ft) high, surmounted by 6 strands of barbed wire, 3 on each side of a "Y"-shaped outrigger, for a total height of 2.4 m (8 ft). Typical uses are for nuclear weapon storage areas and alert aircraft areas.

1.17. Type A2 - Chain link, 1.8 m (6 ft) high, surmounted by 3 strands of barbed wire, angled outward for a total height of 2.1 m (7 ft). Typical uses are for areas containing high mission or monetary value and as a barrier between flight line activities and the base cantonment or housing area.

1.18. Type B - Barbed wire, 3-strand, 1.2 m (4 ft) high. Typical uses are extension of flight line area barriers, perimeter boundary for isolated portions of installations, livestock barrier, and area boundary for on-base bulk material storage areas. Fence used for livestock barrier may be designed to higher standards if necessary to satisfy the requirements of local and state law.

1.19. Type B - Barbed wire, 4-strand, 1.2 m (4 ft) high. The fence is provided for livestock barrier at the boundaries of livestock grazing lands that adjoin airfield operational areas if justified under Boundary Fence (**CATCODE 872245**).

1.20. Type C - Concertina Wire. In normal use one coil provides a barrier 0.9 m (3 ft) in diameter. Concertina wire should be used in multiple stacked coils. It is primarily considered an expedient for short term use or pending the erection of permanent type fencing.

1.21. Requirements for fencing by type of installation and application are stated in AFMAN 31 series for restricted areas, AFI 31-101 for controlled areas, and DoD 5100.76-M for base defense. Details on installation of Type A fencing are found in USACE Specification, which guides Air Force construction.