STANDARD DEFINITIVE DESIGNS
TROOP ISSUE SUBSISTENCE ACTIVITY
TISA COLD/DRY STORAGE FACILITIES

This standard definitive design package has been developed as a guide for design of small, medium and large troop issue subsistence facilities throughout the continental United States. This package provides a general idea of the standard designs and configurations for these facilities. The functional and technical requirements for these facilities must be considered for the specific design. The standard design will be used for the construction of facilities to support the requirements described in this package.

The purpose of this design package is to provide a general idea of the design and configuration of the proposed troop issue subsistence facilities. The design criteria and process are included to aid in the preparation of the design package. The design process is intended to be followed to determine the configuration of the proposed facility.

The process and criteria for sizing have been developed to determine the overall storage requirements based on the installation's needs. The overall storage requirements will be determined by the installation's needs and the proposed design criteria. The design process is intended to be followed to determine the configuration of the proposed facility.

A summary of the major mandatory and optional elements of this design package is listed as follows:

**Mandatory**
- Functional relationships
- Data tables
- Process for sizing
- Days of supply
- Environmental conditions
- System design
- Emergency generator hook-up

**Optional**
- Cost estimates
- Site location
- Land area
- Material handling equipment
- Design configuration

This definitive design package has been developed and verified with assistance from the US Army Corps of Engineers. The design process and criteria are intended to be followed to determine the configuration of the proposed facility.
The stabilizer is used to stabilize the functional and operational requirements for the delivery storage space. It is used to stabilize the system in the desired load and is located directly adjacent to the storage areas and should be minimized to the material handling equipment. Material handling equipment and storage are located in the area to an external area. The extension of the storage space, a maximum of 25% expansion to the individual storage areas is required. However, it is generally limited to 25% with opposite support. A column and beam structure is used for the individual storage areas and further details in expansion of storage should be given to the roof over to avoid limitation of expansion of available storage. The fluorescent lights shall be kept in the designated locations.

In general, all walls separating the individual storage areas shall be considered fixed due to their requirements to provide thermal separation. Walls separating the administration or warehouse office from storage shall be fire rated, and partitions in no provision for expansion, Such storage considerations should be given to these guidelines for the plan sheets and the storage ad elevation on page 6.

General flow through the facility starts at customer parking area with a door directly adjacent to the four wheel cart storage. From this point, utilizing the circulation area, the dry storage area is accessible. Circulation continues along the spine into the administrative area and the subsequent areas. The circulation pattern is specified by the functional requirements for the facility.
MECHANICAL HVAC SYSTEMS

The HVAC system shall be designed to provide heating, cooling, and ventilation to the facility. The system shall consist of a central mechanical system, a decentralized mechanical system, and a supplementary heating and cooling system. The central mechanical system shall consist of a central air-handling unit, a chiller, and a boiler. The decentralized mechanical system shall consist of a distributed air-handling unit, a heat pump, and a heat recovery system. The supplementary heating and cooling system shall consist of a solar heating and cooling system, a ground source heat pump, and a geothermal system.