

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314-1000

ETL 1110-3-472

CEMP-ET

Technical Letter
No. 1110-3-472

24 April 1995

Engineering and Design
MODULAR VAULTS AND VAULT DOORS

1. Purpose. To provide guidance for specifying modular vaults and vault doors.
2. Applicability. This letter applies to all HQUSACE elements, major subordinate commands, districts, and field operating activities (FOA) having military design and construction responsibilities.
3. References.
 - a. AR 190-11
 - b. AR 190-51
 - c. DA Pam 190-51
 - d. AR 380-5
 - e. TM 5-853-3
 - f. Fed. Spec. AA-V-2737
 - g. GSA QPL AA-V-2737
 - h. Fed. Spec. AA-D-2757
 - I. Fed. Spec. AA-D-600
 - j. GSA QPL AA-D-600
4. Discussion. A modular vault is a six-sided prefabricated structure of interlocking panels and a vault door designed to resist forced entry, covert entry, and surreptitious entry. The General Services Administration (GSA) recently tested and approved a new modular vault system which may be used instead of built-in-place vaults for the secure storage of arms, ammunition, and explosives (AA&E); controlled medical substances; classified information; or other sensitive assets.
 - a. Modular Vaults. Advantages of using a modular vault are that it can be erected quickly, that it can be disassembled and reused at another location, and that it can be depreciated as office equipment. Additionally, a modular vault is typically composed of high-strength materials, resulting in vault panels that are thinner in cross-section and lighter than cast-in-place concrete vault construction. The disadvantage of using a modular vault is that it is significantly more expensive than cast-in-place concrete vault construction. Army regulations contain policy and guidance on the use of modular vaults specific to the asset being stored.

(1) Storage of AA&E. AR 190-11 (reference a) allows the use of modular vaults instead of built-in-place vaults and contains guidance on construction allowed for the storage of sensitive AA&E.

(2) Storage of Controlled Medical Substances. AR 190-51 (reference b) contains guidance on construction allowed for the storage of controlled medical substances. The allowed construction is based on the risk level defined in DA Pam 190-51 (reference c) and the Federal Supply Catalog designation of the controlled substances stored. This regulation allows modular vaults "which provide similar resistance to forced entry" to the built-in-place construction specified. It allows construction that provides delay to forced entry equal to or greater than the time required for a response force to arrive in response to an intrusion alarm. The servicing facility engineer will make all determinations of equivalent construction and delay time.

(3) Storage of Classified Information. AR 380-5 (reference d) contains policy for classified information security and construction requirements for various vaults. Although this regulation contains an interim allowance for a modular vault complying with an Underwriters Laboratory standard, designers should use only a GSA-approved modular vault.

b. Vault Doors. A GSA modular vault enclosure is a system which includes a vault door. The vault enclosure provides resistance to an attempt to compromise its contents. The resistance is in terms of delay time in minutes to an attempted entry. The delay time of the enclosure is affected by which vault door is used. Vault doors complying with two different GSA vault door specifications are discussed below.

(1) Class 8 Vault Door. GSA has tested and certified a modular vault with a Class 8 vault door that complies with the minimum standards for security equipment as required in Information Security Oversight Office Directive No. 1, "National Security Information." A GSA certified modular vault including a GSA certified Class 8 vault door can provide 15 minutes of resistance against a multilevel tool attack similar to an attack using medium threat severity level forced entry tools as described in TM 5-853-3 (reference e). The Class 8 vault door including the lock also provides 30 man-minutes of covert entry and 20 hours of surreptitious entry resistance. If more than one vendor of Class 8 vault doors becomes available, the Class 8 vault doors will be on a GSA Qualified Products List (QPL).

(2) Class 5 Vault Door. A Class 5 vault door may also be used with a GSA certified modular vault. Some facilities choose

24 Apr 95

the Class 5 rather than Class 8 vault door due to its significantly lower cost and weight, although it provides a lesser degree of forced entry resistance. A GSA certified Class 5 vault door provides 10 minutes of resistance against hand tools which is similar to an attack using the low threat severity level forced entry tools described in TM 5-853-3. Class 5 vault doors can be ordered from a GSA QPL.


c. Specifying Modular Vault Enclosures. A modular vault enclosure should be specified based on GSA approval and certification. Once GSA has certified a modular vault or vault door, the manufacturer is not allowed to make changes to the product without GSA approval. A GSA certified modular vault may be ordered from a GSA QPL or specified using federal specifications. Use the specification that best fits the vault requirements based on regulatory guidance, delay time, or other identified design considerations.

Component	Specification
Modular Vault	Fed. Spec. AA-V-2737 (reference f) QPL AA-V-2737 (reference g)
Class 8 Vault Door	Fed. Spec. AA-D-2757 (reference h)
Class 5 Vault Door	Fed. Spec. AA-D-600 (reference i) QPL AA-D-600 (reference j)

5. Design Assistance. For specific project guidance or for answers to general questions regarding the content of this letter, contact the Protective Design-Mandatory Center of Expertise, U.S. Army Corps of Engineers, Omaha District, ATTN: CEMRO-ED-ST, 215 North 17th Street, Omaha, NE 68102-4978 or telephone (402) 221-3151.

6. Implementation. This letter will have routine implementation as defined in paragraph 6c, ER 1110-345-100.

FOR THE DIRECTOR OF MILITARY PROGRAMS:


 RICHARD C. ARMSTRONG, P.E.
 Chief, Engineering Division
 Directorate of Military Programs