

SECTION 8. STRUCTURAL ENGINEERING STANDARDS

8.1 SEISMIC DESIGN CRITERIA

8.1.1 Ground Motion

1. —0.2 second Spectral Response Acceleration (5% of Critical Damping, Site Class B), Maximum Considered Earthquake: $SS=.30$
2. —1.0 second Spectral Response Acceleration (5% of Critical Damping, Site Class B), Maximum Considered Earthquake: $S1=.10$

8.1.2 Site Classification

1. When soil properties are not otherwise determined by means of a site-specific geotechnical investigation, Site Class D shall be assumed.

8.2 WIND LOADS

8.2.1 Basic Wind Speed

1. 40 meters/second (90 mph) 3 second gust.

Note: Specified wind speed per Figure 1 of U.S. Army Corps of Engineers (USACE) TI 809-01, dated 3 August 1998.

8.3 SNOW LOADS

8.3.1 Ground Snow Load

1. 170 kg/m^2 (35 psf)

Note: This ground snow load has been carried over from Army TM 5-809-01/Air Force AFM 88-3, Chapter 1, dated May 1992, as directed by ACC. This value exceeds the 75 kg/m^2 (15 psf) value specified in TI 809-01, dated 3 August 1998.

8.4 FOUNDATION DESIGN CRITERIA

8.4.1 Frost Penetration - Minimum depth to bottom of foundation

1. Heated Structures: 940 mm (3 feet, 1 inch)
2. Unheated Structures: 1245 mm (4 feet, 1 inch)

Note: Specified footing depths based on Figure 1 of U.S. Army Corps of Engineers (USACE) TI 809-01, dated 3 August 1998, for a maximum frost penetration of 1625 mm (64 inches).

8.5 SOIL BEARING CAPACITY

Maximum allowable design soil bearing pressure for foundations shall be determined for each site by means of a site-specific geotechnical investigation. In the absence of such, with the approval of the Base Civil Engineering Office, a value of 95 kPa (2000 psf) may be assumed. A one-third increase in allowable bearing pressure is permissible for short duration loads. All footings shall bear on a 300 mm (1 foot, 0 inch) layer of compacted select structural fill.