

Table 3.3-2 Values of Site Coefficient F_v

| Site Class | Mapped MCE Spectral Response Acceleration Parameter at 1 Second Period ^a | | | | |
|------------|---|----------------|----------------|----------------|----------------|
| | $S_I \leq 0.1$ | $S_I = 0.2$ | $S_I = 0.3$ | $S_I = 0.4$ | $S_I \geq 0.5$ |
| A | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| B | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| C | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 |
| D | 2.4 | 2.0 | 1.8 | 1.6 | 1.5 |
| E | 3.5 | 3.2 | 2.8 | 2.4 | 2.4 |
| F | — ^b | — ^b | — ^b | — ^b | — ^b |

^a Use straight line interpolation for intermediate values of S_I .
^b Site-specific geotechnical investigation and dynamic site response analyses shall be performed.

3.3.3 Design acceleration parameters. The parameters S_{DS} and S_{DI} shall be determined from Eq. 3.3-3 and 3.3-4, respectively:

$$S_{DS} = \frac{2}{3} S_{MS} \quad (3.3-3)$$

and

$$S_{DI} = \frac{2}{3} S_{MI} \quad (3.3-4)$$

3.3.4 Design response spectrum. Where a design response spectrum is required by these *Provisions* and site-specific procedures are not used, the design response spectrum shall be developed as indicated in Figure 3.3-15 and as follows:

1. For periods less than or equal to T_0 , S_a shall be taken as given by Eq. 3.3-5:

$$S_a = 0.6 \frac{S_{DS}}{T_0} T + 0.4 S_{DS} \quad (3.3-5)$$

2. For periods greater than or equal to T_0 and less than or equal to T_S , S_a shall be taken as equal to S_{DS} .
3. For periods greater than T_S and less than or equal to T_L , S_a shall be taken as given by Eq. 3.3-6:

$$S_a = \frac{S_{DI}}{T} \quad (3.3-6)$$

4. For periods greater than T_L , S_a shall be taken as given by Eq. 3.3-7.

$$S_a = \frac{S_{DI} T_L}{T^2} \quad (3.3-7)$$

where:

S_{DS} = the design spectral response acceleration parameter at short periods

S_{DI} = the design spectral response acceleration parameter at 1 second period

T = the fundamental period of the structure (sec)

T_0 = $0.2 S_{DI} / S_{DS}$

T_S = S_{DI} / S_{DS}

T_L = Long-period transition period shown in Figure 3.3-16 (conterminous U.S. except California), Figure 3.3-17 (California), Figure 3.3-18 (Alaska), Figure 3.3-19 (Hawaii), Figure 3.3-20 (Puerto Rico), and Figure 3.3-21 (Guam and Tutuila).

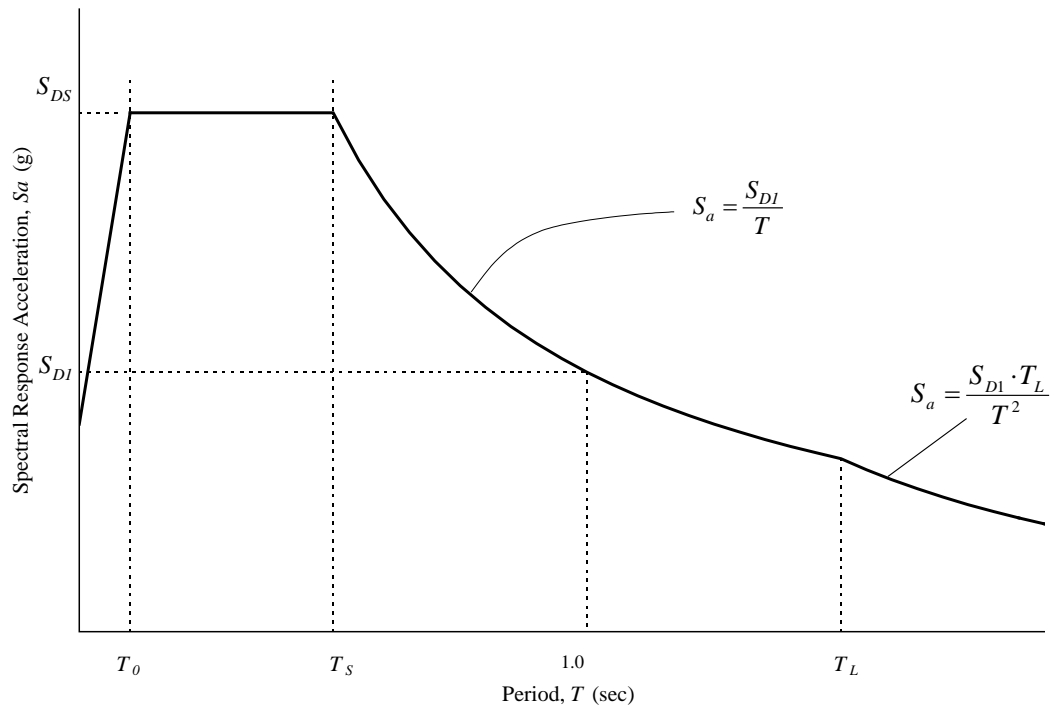


Figure 3.3-15 Long-Period transition Period.