FIGURE 3.3-1 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR THE CONTINUOUS UNITED STATES OF 0.2g SFC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

FIGURE 3.3-1 (continued) MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR THE CONTINUOUS UNITED STATES OF 0.2g SFC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

REFERENCE


FIGURE 3.3-5 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR REGION 2 OF 0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B
FIGURE 3.37 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR REGION 3 OF 0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

Explanation

Contour intervals, % g

- 100
- 75
- 50
- 25
- 10
- 5
- 2
- 1
- 0

Note: contours are irregularly spaced

- Areas with a constant spectral response acceleration = 0.2 % g
- Point value of spectral response acceleration expressed as a percent of gravity
- Contours of spectral response acceleration expressed as a percent of gravity. Arrows point in direction of decreasing value.

DISCUSSION

Refer to the map of Maximum Considered Earthquake Ground Motion for the Contiguous United States of 0.2 sec Spectral Response Acceleration (Figure 3.3.1) for discussion and references.

Index map showing location of study area.
FIGURE 3.3-8 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR REGION 3 OF 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B
FIGURE 3.3-9  MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR REGION 4 OF
0.2 AND 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

Contour intervals, % g

-200 -
-175 -
-150 -
-125 -
-100 -
-75 -
-50 -
-25 -
-10 -

0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

Contour intervals, % g

-150 -
-125 -
-100 -
-75 -
-50 -
-25 -
-10 -

1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

Explanation

+ 6.2

Point value of spectral response acceleration expressed as a percent of gravity

Contour of spectral response acceleration expressed as a percent of gravity. Use these to plot your own map of the study area.

DISCUSSION

Refer to the maps of Maximum Considered Earthquake Ground Motion for the Contiguous United States of 0.2 and 1.0 sec Spectral Response Acceleration (Figures 3.3.1 and 3.3.2) for discussion and reference.

Index map showing location of study area
**FIGURE 3.3-10** MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR HAWAII OF 0.2 AND 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

**30.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)**

0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

**Explanation**

- **Point value of spectral response acceleration expressed as a percent of gravity.**
- **Contour of spectral response acceleration expressed as a percent of gravity.**

**DISCUSSION**

The acceleration values contoured on the maps for the main horizontal component of acceleration. For design purposes, the common site condition for the maps is to be taken as Site Class B.

The two areas shown as zero boundaries are the projection from the earth's surface of horizontal rupture planes at 9 km depth. Spectral accelerations are constant within the boundaries of the areas. The heavier on the boundary and inside the area is the median spectral response acceleration given 1.5.

**Leyendecker, P., and Knuehl, K.** 2004, has prepared a CD-ROM that contains software to allow determination of Site Class B map values by latitude/longitude. The software on the CD contains site coefficients that allow the user to deduce map values for different Site Classes. Additional maps at different scales are also included on the CD. The CD was prepared using the same data as that used to prepare the Maximum Considered Earthquake Ground Motion maps.

The National Seismic Hazard Mapping Project Web Site, http://hofmapps.usgs.gov, contains electronic versions of this map and others. Documentation, gidded versions, and Arc/Info Coverage used to make the maps are also available.

Map prepared by U.S. Geological Survey.

**REFERENCES**

- U.S. Geological Survey.
FIGURE 3.3-11 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR ALASKA OF 0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

**Explanation**

- **Contour intervals, % g**:
  - 200
  - 175
  - 150
  - 125
  - 100
  - 80
  - 60
  - 40
  - 35
  - 30
  - 25
  - 20
  - 15
  - 10
  - 5
  - 0

- **Natri value of spectral response acceleration expressed as a percent of gravity**

- **Continuous of spectral response acceleration expressed as a percent of gravity. Maximum point in direction of descending value.**

- **Locations of faults** (see DISCUSSION)
  - The number on the fault is the median spectral response acceleration times 1.5 expressed as a percent of gravity.

**DISCUSSION**

The acceleration values contained on this map are for the maximum horizontal component of acceleration. For design purposes, the reference site condition for the map is to be taken as Site Class B.

A line shown as a fault location is at the projection to the earth's surface of the edge of the fault rupture area located closest to the earth's surface. Only the portion of the fault that is defined in determining design values is shown. The number on the fault is the median spectral response acceleration times 1.5. The values on the fault portion shown may be used for interpolation purposes.

Selected contour map faults have been deleted for clarity. In some instances, interpolation may be done using fault values and the nearest adjacent contours.

Legends, Planters, and Relations (2004), 2005 have prepared these maps to allow determination of Site Class B map values by latitude-longitude. The software on the CD contains site coefficients that allow the user to adjust map values for different Site Classes. Additional maps at different scales are also included on the CD. The CD was prepared using the same data as that used to prepare these maps.

**REFERENCES**


The National Seismic Hazard Mapping Project Web Site, http://bhuanp.com/geo/hazard-templates/, contains electronic versions of this map and others. Documentation, guidance values, and Arc/Info coverage used to make the maps are also available.
FIGURE 3.3-13 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR PUERTO RICO, CULEBRA, VIEQUES, ST. THOMAS, ST. JOHN, AND ST. CROIX OF 0.2 AND 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING)

EXPLANATION

Point value of spectral response acceleration expressed as a percent of gravity.

Contour value of spectral response acceleration expressed as a percent of gravity. The arrow in the direction of decreasing value.

DISCUSSION

The acceleration values shown on this map are for the random horizontal component of acceleration. For design purposes, the reference site condition for the map is 7.4 km per second. The map shows the isoseismal areas for the 0.2 and 1.0 second periods. The contour intervals are 20.0, 10.0, 5.0, and 2.0 g. The map is intended to be used for the design of buildings and other structures. The map is available in two formats: as a hardcopy map and as a digital version on the USGS National Earthquake Information Center website.

REFERENCES


Map prepared by U.S. Geological Survey.
FIGURE 3.3-14 MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR GUAM AND TUTUILLA OF 0.2 AND 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

DISCUSSION

Legends: (a), (b), and (c) 2005, 2006 have prepared a CD-ROM that contains software to allow determination of Site Class B map values by input latitude-longitude or zip code. The software on the CD contains site coefficients that allow the user to adapt map values for different Site Classes.

Map prepared by U.S. Geological Survey.

REFERENCES


