SEISMIC CODE EVALUATION

HONDURAS

Evaluation conducted by Guillermo Santana

NAME OF DOCUMENT: No document has ever been published or is available for seismic design in the Republic of Honduras.

YEAR:

GENERAL REMARKS

SPECIFIC ITEMS:

NOTE: Bracketed numbers refer to Code specific chapters or articles: [1.2.3]
Parentheses numbers refer to Items of this document: (see 2.2)

1. SCOPE

1.1 Explicit Concepts.

As can be seen from the map in section (2.1), Honduras has a considerable earthquake hazard. Historically it has suffered damage from earthquakes. Structural damage and liquefaction was reported as occurring within the Honduran territory during the Feb 6, 1976 Guatemala Earthquake.

1.2 Performance Objectives.

2. SEISMIC ZONING AND SITE CHARACTERIZATION

2.1 Seismic Zoning (Quality of Data).

Earthquakes with epicenters in Honduras have been recorded during the recent history. In the graph, a plot of epicenters for the period between 1933 and 1992 shows that rapidly growing cities like San Pedro Sula (over 1,000,000) has been exposed to the hazard in the past.
2.2 Levels of Seismic Intensity.
2.3 Near Fault considerations.
2.4 Site Requirements.
2.5 Site Classification.
2.6 Peak Ground Accelerations (Horizontal and Vertical).

3. PARAMETERS FOR STRUCTURAL CLASSIFICATION

3.1 Occupancy and Importance.
3.2 Structural Systems.
3.3 Structural Regularity.
3.4 Structural Redundancy.
3.5 Ductility of elements and components.

4. SEISMIC ACTIONS

4.1 Elastic Response Spectra (Horizontal and Vertical).
4.2 Design Spectra.
4.3 Representation of acceleration time histories.
4.4 Design Ground Displacement.

5. DESIGN FORCES, METHODS OF ANALYSIS AND DRIFT LIMITATIONS

5.1 Load Combinations including Orthogonal Seismic Load Effects.
5.2 Simplified Analysis and Design Procedures.
5.3 Static Method Procedures.
5.4 Mode Superposition Methods.
5.5 Non-Linear Methods.
5.6 Torsional considerations.
5.7 Drift Limitations.
5.8 Soil-Structure Interaction Considerations.

6. SAFETY VERIFICATIONS

6.1 Building Separation.
6.2 Requirements for Horizontal Diaphragms.
6.3 Requirements for Foundations.
6.4 P-∆ Considerations.
6.5 Non-Structural Components.
6.6 Provisions for Base Isolation.
7. SMALL RESIDENTIAL BUILDINGS

8. PROVISIONS FOR EXISTING BUILDINGS

**RECOMMENDATIONS FOR CODE IMPROVEMENT**

*A code must be drafted.*