

## ABSTRACT

This report covers the collapse analyses of floor- over-basement areas.

The floors were separated into floor systems and were analyzed "as built" and for various upgrading configurations through an examination of individual elements.

The purpose of the report is two-fold: first, to increase the data base of analyzed "as built" NSS building floors; and second, to determine the expedient upgrading potentials of NSS building floors.

This report summarizes the results of the collapse analyses of the 11 NSS buildings examined in this study. The results of the "as built" analyses are then grouped with the collapse analyses of 36 NSS buildings to provide a population of 46 buildings (one building was reexamined).

The predicted collapse overpressures, examined previously by Wiehle (1974), of the weakest floor element by building and by floor system are presented in the form of histograms and cumulative frequency distributions.

The effect of frame type on the collapse strength of the floor elements was examined as in the previous report (Wiehle, 1974).

This report also summarizes, for the 11 buildings analyzed herein, the upgrading potentials of floor elements grouped by individual element, floor system and building.

Preliminary indications of these collapse analyses indicat  that the best way to assess which building and/or element is most upgradable is to look for elements, especially slabs or pan-joist systems, having the greatest span (i.e., span lengths great enough to allow intermediate supports at third- or even quarterspan intervals).