

The appalling consequences of the mass fires, which took the form of fire storms or conflagrations, were the outstanding feature of the attacks on cities in World War II.

Fire storms and conflagration were produced by very heavy attacks concentrated in space and time which started simultaneously a large number of fires close together. Both mixed high-explosive and incendiary bombs and the atomic bomb are capable of producing such effects. The structural arrangement of cities determines whether wartime fire attacks will produce fire storms and conflagrations.

The primary factors are considered to be:

- (a) Building density.
- (b) Combustibility of structures.
- (c) Firebreaks.
- (d) Size of target area.

Contributing factors are:

- (a) Continuity of combustible construction.
- (b) Occupancy combustibility.
- (c) Size of buildings.
- (d) Topography.

Weather factors are:

- (a) Humidity.
- (b) Precipitation.
- (c) Wind.

Since the foregoing factors are all present in varying degrees in American cities, what happened in Germany and Japan could happen here. Adequate fire-control planning for civil defense will depend to a great extent on an assessment of those characteristics of built-up areas which would make them susceptible to fire storms and conflagrations. The method involves resolving the urban city areas into subareas to obtain an estimate of their susceptibility to fire and to the production of great mass fires.

Defining the areas of a community in these terms will not only assist in planning what to do in case of attack but will act a guide to longrange planning designed to eliminate or reduce to a minimum the existence of highly vulnerable areas in our cities. Even if this country never suffers an attack, we will have made permanent strides toward a better America.