

IS THERE A DEFENSE?—An atomic explosion such as the one pictured (center) left nothing but strewn wreckage of buildings and bodies when it leveled Hiroshima (left) in 1945. Despite the devastating, destructive force it unleashes, the safe at right proves that shelters can be built to withstand its power and radiation. The structure, built of steel and concrete was above the ground and only several hundred feet from the point of explosion.

Albright Says Bomb Shelters Necessary for Atomic Defense

A lot of Americans are overlooking the important concept of defense in their headlong rush to advocate more and bigger missiles and offensive weapons as the best method of preventing atomic annihilation, says Gifford H. Albright, assistant professor of architectural engineering.

When the A-bomb first became known to the public, they thought there was no way to survive the staggering force it unleashes and the only hope for survival in the atomic age was to maintain the superior offensive force, Albright said.

But just as methods of protection against weapons have been devised down through the ages, since the shield stopped the sword, protection against atomic weapons is now being developed.

"People are beginning to realize how relatively simple it is to protect oneself against radio-active fallout and survive an atomic attack," said Albright, who was responsible for test projects at the Eniwetok and Nevada atomic test sites from Feb. 1956 to June 1958.

Albright is now director of a \$119,000 research and study program here at the University studying atomic shelters.

"Those of us who advocate more concentration on defensive methods are fighting a gaining battle," said Albright.

Civil Defense is receiving greater financial support from the federal government and more emphasis is being placed upon its role in the protection against atomic weapons. The administrative status of the

Civil Defense has been changed. It has been moved directly under the President.

The Veterans' Administration now provides loans for shelter construction.

"In addition to structural problems, there are many psychological and sociological problems that must be considered in the design of shelters," Albright said.

Because of radiation people may have to occupy these shelters for extended periods of time. Therefore there are architectural and engineering problems of space determination, heat elimination and adequate air, food and water supply.

Several tests have been made in various places where groups of people have gone into a shelter to see if they can subsist for a period of time and endure not only the isolation from the outside world but also the close continual contact with each other.

The latest of these tests took place in Pittsburgh where 30 people spent 2 weeks sealed in a 12 by 20 foot cubicle. Though there were personality clashes, frayed nerves, unpleasant odors, tasteless food and even a teenage love triangle, the 30 volunteers showed that human beings can live like sardines for two weeks and still survive as human beings.

There is another illusion most people have that Albright and his crew would like to dispel.

"Most people think that shelters must be underground separate units, usable only as shelters," he said.

"But our job is to figure out how atomic shelters can conveniently and inexpensively be incorporated into new and presently existing buildings, serving as rooms for daily use as well as

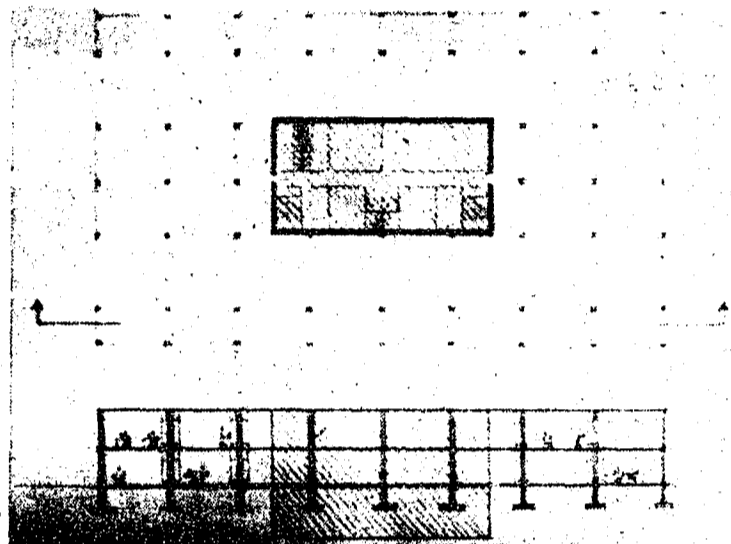
emergency protection as a shelter." Allan F. Dill, assistant professor of architectural engineering, is deputy director of the project and seven others are studying the environmental requirements and planning aspects for integrated shelter concepts.

They are Melvin Iseberg, associate professor of architectural engineering, Walter H. Hill and Rolv O. Enge, assistant professors of architecture, and graduate assistants in architectural engineering Albert Reynolds, Lester Boyer and Roger Kaness. Other staff members are working on structural aspects of the shelter problem.

The researchers have developed two convertible shelter concepts on which they are concentrating—the core concept and the plaza concept.

In the core concept, toilets, storage rooms and other facilities which do not need outside light are designed with heavy walls in the middle of a building so that they can also suffice as shelters.

In the plaza concept rooms are designed under a plaza for a type of room such as storage or visual aids.



CORE CONCEPT—One of the basic concepts devised by University researchers for incorporating atomic shelters into new buildings is the core concept illustrated above. The center area, surrounded by heavy walls, contains toilets, storage space, visual aids rooms, etc., and suffices also as emergency shelter.

Apartments--

(Continued from page three)

lot of temporary housing was built on university campuses. However, the undergraduate married enrollment has dropped and in the last 10 years the trend has been for an increasing number of married graduate students, Mueller said.

Other universities are now building permanent housing units for graduate students, Mueller said citing the large housing developments of Purdue and Michigan State.

The housing project here also includes five fenced-in play areas for children with laundry and storage facilities in each unit.

The new apartments include one large room which is subdivided into a living-dining area and a kitchen, an all tile bathroom and one or two bedrooms.

Miller said the apartment buildings should all be completed by September 1 and the landscaping finished later in the fall.

Ruef and Sommerfeld To Speak in Colorado

Two faculty members of the College of Home Economics, Mrs. Ruth R. Ruef, assistant dean for research, and Miss Edna Sommerfeld, assistant dean for continuing education, will speak before section meetings of the American Home Economics Association's annual meeting in Denver, Colo., June 28 to July 2.

Miss Sommerfeld will report on a local experiment concerning the interpretation of Home Economics to the public.

Penn State's new Beaver Stadium is 80 rows high on each side. The closed end of the horseshoe remains as it was, 35 rows high.

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