

# 'Sealed Building' Fad Losing Steam

By JOHNETTA B. GRATZ  
The energy crisis is even making an impact on architecture.

At meetings, conferences and cocktail parties, architects are reexamining and often detailing designs from the past few decades that have often been based on the assumption that energy was unlimited and cheap.

Everything from window glass to lighting systems is being re-studied. Complicated mechanisms for reusing wasted heat or harnessing solar energy are talked about with new enthusiasm. There are predictions of modest revivals of window shutters and awnings. And there is even talk that refurbishing old buildings — solidly built but mechanically somewhat obsolete — will become the hottest trend in the recycling fever.

## Sealed Buildings Eyed

Perhaps in sharpest focus for reexamination is the sealed office building — that now common phenomenon that started with the construction of the UN Secretariat building and Lever House and found its ultimate expression in the World Trade Center. As an all-encompassing environment, totally mechanized and independent of outside weather conditions, the sealed building has often been called American technology at its best.

But today there are doubts. Architect Richard J. Stein has been researching and rethinking the energy consumption problem for several years and is considered by many architects the profession's leading expert. "Buildings consume 30 per cent of all energy," Stein says, adding that only transportation exceeds that percentage. "And it is appalling how inefficiently that energy is used," he adds.

"The idea of a sealed building was always dependent on a complicated internal mechanical system," he says. "For years we've been building anything we wanted and just putting in bigger systems to meet increased demands. The answer is embarrassingly simple. If you adopt the basic principle of placing the building more in balance with the natural environment, energy consumption will decrease. It's an idea our building designers have lost."

## Airplane Analogy

Stein uses the analogy of the airplane to illustrate the principle, pointing out that the occupant of a plane seat can adjust the light, air, temperature and, in some cases, even the music to his own desires. And if the seat is unoccupied, the systems are dormant.

In his design for FS 55 in the Amadale section of Staten Island, Stein applied some of these ideas. "The windows are flexible," he says. "There's a top window that opens out for when it's raining and a low one that opens in and doesn't blow across the desk tops. There's a floor to ceiling window at the front of the room to direct light on the teacher and each room has multiple light switches so that one-

third of it can be turned off when not needed. The school is compact, and inside areas that don't need natural light don't get it."

These kinds of features, Stein adds, also "create more humane buildings. You don't lose connection with the outside and even visually the resulting variation in light levels is better. It's geared to the individual."

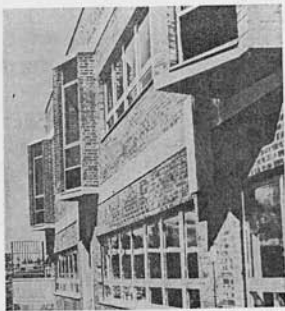
All this, Stein and other architects point out, is the direct antithesis of prevalent patterns of the day that include centrally controlled air systems and all-over lighting.

## Rethinking CUNY Design

Peter Samton, chief of design for Gruzen & Partners, echoes many of Stein's thoughts and points out that his office has been rethinking its design of the new CUNY York College campus in South Jamaica in light of the energy crisis. Initially, Samton says, plans called for a more spread out building plan.

"Now," Samton notes, "we've made the buildings more compact with less exterior space which means less heat loss. There will be four or five buildings almost joined into one, the percentage of windows is reduced and we're looking into a system that would use waste heat from the air conditioning system to heat water."

One of the more signifi-



Post Photo by Frank Leonard  
Energy-saving windows of FS 55 on Staten Island.

cant results of the energy crisis, Samton says, is that builders aren't going to be that eager for the suburbs to build. "America is basically self-sufficient in energy," he says, "and I don't think buildings per se can help alleviate problems that may exist."

Two large Gruzen clients, Samton says, in recent weeks have cancelled rural building plans and are looking for areas closer to the city.

Emery Roth & Sons have designed probably more sealed buildings in this city than anyone else and were co-architects of the World Trade Center. Richard Roth

Jr., a partner in the firm, argues that sealed buildings remain the most economical to build. "America is basically self-sufficient in energy," he says, "and I don't think buildings per se can help alleviate problems that may exist."

That many architects appear to disagree doesn't faze Roth. "If you get five architects in one room you'll get five different answers," he says.