



The
Underground
Home



New York World's Fair 1964-1965

Why live underground?

The need for a better life, the will to control one's way of life, has led people to move away from an unhealthy or unpleasant climate, from air polluted by wastes, from invasions of privacy, from the assaults of sounds. The move can be across a continent, a hundred miles, or it can be only a few feet.

A few feet underground can give man "...an island unto himself"; a place where he controls his own world—a world of total ease and comfort, of security, safety and above all, privacy.

Climate Control: Create your own climate by "dialing" temperature and humidity settings. Pressurize the structure—much as a plane cabin is pressurized—and create any season of the year. Underground, one is free of the outside climate, and health no longer depends on it. Sufferers of chronic colds, asthma, sinus and allergies enjoy relief and the healthy man feels healthier.

The air in underground structures is drawn through a central point assuring absolute control of all climate factors: the breeze of a mountain-top, the exhilarating high-pressure feeling of a Spring day can be created at will.

Atmosphere Control: Live in air completely free of impurities and so clean that housekeeping is reduced to one light dusting a month. Passage of the air through fiber filters and electrostatic precipitators removes smog, smoke, automobile exhaust fumes and similar by-products of urban and suburban life. The constant, automatic flow of

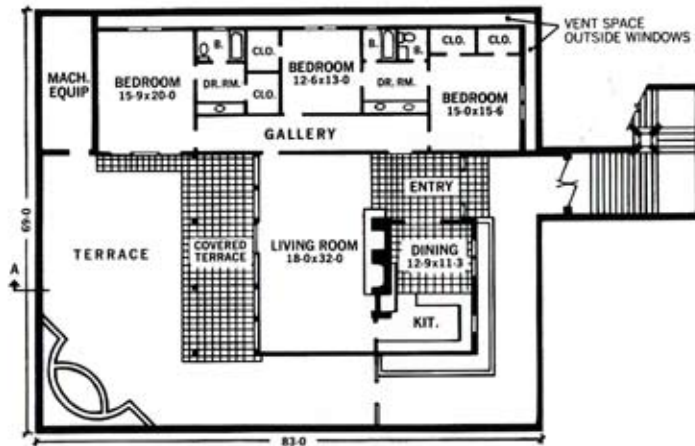
thousands of tons of fresh, filtered air ensures ideal ventilation without any danger of harmful cross-drafts.

Sound Control: Sound or silence is yours to choose underground. Thousands of tons of steel, concrete and earth prevent all sound from entering unless you invite it in. The clamor of traffic, jets, noisy neighbors—all are gone with a turn of a switch and you are free to rest in silence, or experience for the first time the full range of sensations that today's sensitive stereo systems are able to produce.

Economy: Underground structures require practically no maintenance, depreciate little, and have a longevity literally longer-than-lifetime. Thus initial costs, which are slightly more than custom-designed surface construction, are quickly offset. Insurance below is a mere one-eighth of normal rates; the costs of utilities in a home surrounded by tons of natural insulation where temperatures vary only a few degrees throughout the year, are about one-third. Finally, underground construction allows double use of real estate; the overhead ground surface may be used for sunrooms, garages, or a playground with enough room left over for a garden or private park.

Security and Privacy: Life underground is free from natural hazards, even earthquakes. An underground structure cannot be destroyed by fire. Its location is less susceptible to theft and other criminal mayhem. Perhaps, most important, you have the comfort of being alone when you wish. Free from the involvement of neighbors, the danger of intruders, the home once again becomes "a man's castle."

How to build underground:

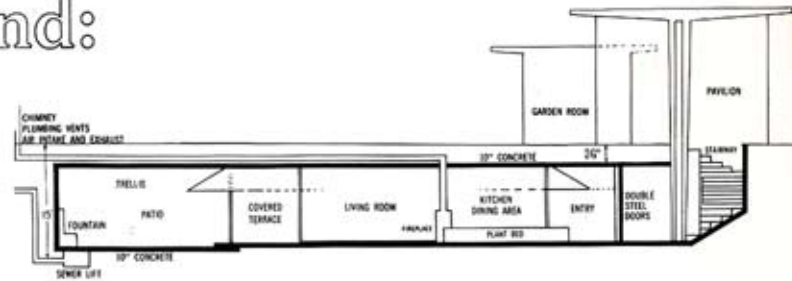


THE UNDERGROUND HOME at the New York World's Fair is developed to serve as a prototype for future underground residential design. Built to incorporate the best and most practical features of a series of pilot homes—one of which has been lived in for over 3 years—the UNDERGROUND HOME offers a complete first hand view of construction and operating details of underground living.

Unique Construction: The entire 10-room home with its "outdoor" terrace and garden areas encased in a concrete-steel shell, is sunk fifteen feet underneath a landscaped garden. The shell, which measures 70' wide by 80' long, provides a floor area of 5,600 square feet and encloses well over 75.5 thousand cubic feet of air. The World's Fair home is totally moisture proof.

Inside the shell, the living area is divided into "exterior" and "interior" areas. Over the home's ceilings are passageways carrying utility lines and plumbing pipes to provide easy access for repairs and alterations.

Connecting the interior of the shell with the outside is a custom-built air system that draws air from the bottom of a breathing tube or "Snorkel" down through a mechanical



equipment room. There the air temperature, humidity and pressure are regulated at will. From the equipment room, air flows under the floor of the house, circulates through the entire shell and returns to the outside via the "Snorkel." The air filtration system can be modified to cope with overhead dust and sandstorms and even to remove fall-out particles.

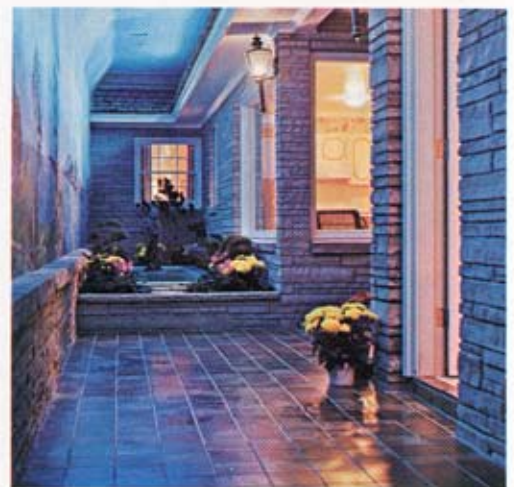
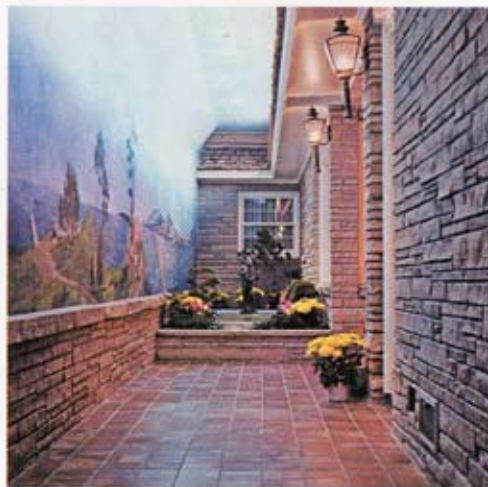
The room also contains a 20KW diesel generator with an automatic, seven second cut-in in case of outside electrical utility failure, a sewage lift and an automatic sewage ejector.

Luxurious Living: Every detail of the UNDERGROUND HOME has been developed to illustrate the luxury which underground living can provide.

"Murals of Light" surround the home. Every room in the house looks out on a panoramic landscape lit by special effects in all shades of daylight and nighttime. Dimmers and a specially designed low-voltage light control system permit a rising sun effect in the kitchen, while a star-filled night blankets the "outdoor" patio.

Carefree Living: UNDERGROUND HOMES at the World's Fair and elsewhere require little or no maintenance—no windows to wash or replace, no exteriors to paint, no roof to repair. The unique air-purification system makes dusting once a month more than adequate. Corroding smog and polluted air cannot affect roofing, metal equipment or masonry in this filtered-air home. Controlled lighting does away with fading of upholstery, paints and carpets, leaving them fresh and cleaner longer.

In an underground home, the décor of one's choice can be blended with a favorite "outside" view; the time of day or night may be "dialed" to fit any mood or occasion. Here, in a home recently completed under a Colorado peak, the "outside" views span a continent with San Francisco's Golden Gate to the West and New York's skyline to the East. (1) Entrance by daylight, at sunset and evening, (2) Living Room, (3) Dining Room, (4) Terrace with swimming pool, (5) Terrace's New York City vista.





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Where can one build underground?

From a Colorado Rockies peak 9,500' above sea-level to a Long Island swamp, experience in UNDERGROUND HOME construction shows one can build anywhere!

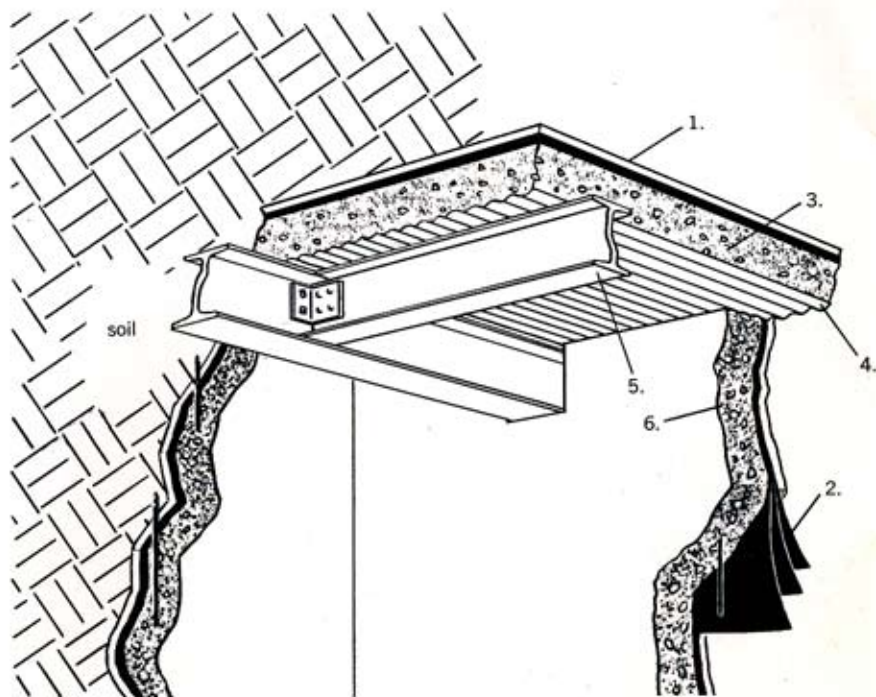
The construction techniques developed by the Underground World Home Corporation make it possible to build a home in any substratum, be it granite or bog land. The secret lies in the oblong, concrete-steel shell that not only seals out all moisture but is engineered to protect the home from earthquakes and other natural hazards for several lifetimes.

Here a cross-section of the shell (right) encasing the UNDERGROUND HOME at the World's Fair reveals the unique construction features of this revolutionary concept of residential design.

Protected against accidental puncture by Celotex panels, the three-layered membrane forms a water-tight seal around the entire shell. Inside the membrane, the concrete-steel shell varies in thickness from 20" on the floor to between 10" and 13" for the walls and ceiling. The 18" girders, forming the interior frame, support a dead load of over 2 million pounds of soil, permitting the homeowner to build surface structures such as garages and sun-rooms in addition to a small park or garden.

All connections through the shell and its protective membrane, including air-vents, utility lines and sewage pipes, are water sealed and enter at a central point assuring ready accessibility.

This unique, sealed shell can enclose a world of any dimension or content. The thousands of tons of natural soil or rock insulation protecting it from surface sound and the attack of the elements make it an ideal container for any structure in which people work, live, play or study.



1. Celotex protecting panels.
2. 3-layer waterproof membrane.
3. 10" poured concrete.
4. Corrugated steel support for roof slab.
5. 18" steel girder.
6. 13" poured concrete siding.

Examples of current underground construction

"I'm not talking castles in the sky. These are strictly below the turf."

Alex Bilanow
Washington Daily News
October 2, 1964

Accomplished

- 10-room home, Plainview, Texas: The underground residential prototype, inhabited by family of 4 for 3 years.
- Luxury private home, Duncanville, Texas: Featuring the first 'outdoor' patio.
- Shopping center, Osaka, Japan: 185 retail stores, mall, parking area overhead.
- Underground Home, New York World's Fair: 516,000 toured it during the 1964 season!
- Underground Home, under a Colorado mountaintop: 9,500 feet above sea level! (See center spread)
- High School, Lake Worth, Texas: 18 classrooms for 475 students.

In Construction

- Model Home, Las Vegas, Nevada: First underground housing development beneath dwellers' private golf course.
- "First 21st Century City," Pittsburgh, Pennsylvania: 75-acre ravine being converted into a \$250-million research center.

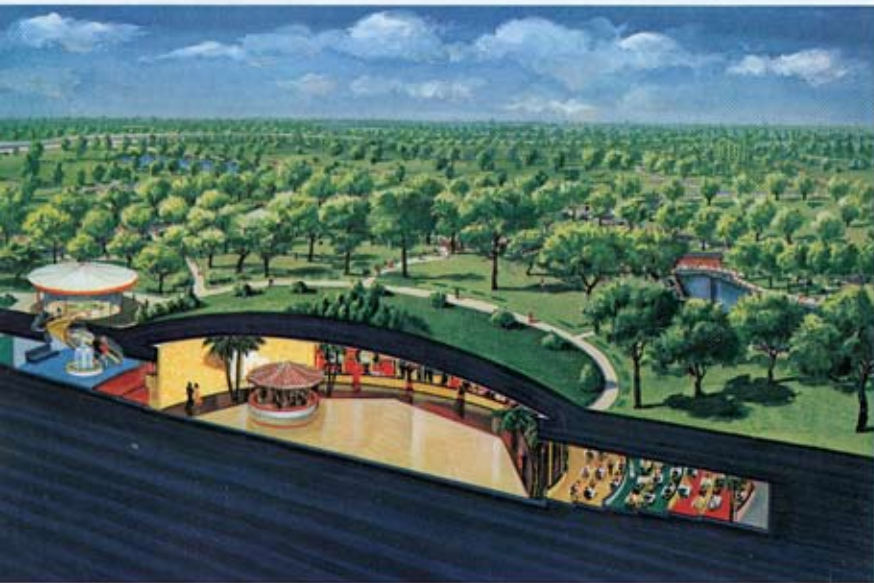
Proposed

- Ultra-luxurious underground restaurant, Central Park, New York City, N. Y.
- Underground School, Lake Worth, Texas: To accommodate nine grades, 1,300 students.
- Underground Motels and Restaurants near airports and large transportation terminals everywhere.

Today, from a hospital in Stockholm, Sweden, to a shopping center in Osaka, Japan, the development of underground structures is expanding along with man's need for an environment he can control.



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Proposed underground construction, serving industry and commerce: (1) Underground Shopping Center, (2) Underground Motel, (3) Underground Restaurant and Night Club.

Design and construction techniques and the actual services of 18 different engineering specialists go into the planning of construction by the Underground World Home Corporation.

At present, UNDERGROUND HOMES completed or in development in various parts of the United States are all custom installations. Currently, construction costs for these Homes in the United States vary between \$12 and \$24 per square foot, depending on the expense of local labor and materials. The development of prefabricated shells for non-custom installations is expected to radically lower the overall construction costs.

For further information, write the
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