

World's Fair Offers Varied Electrical Fare

NEW YORK — The New York World's Fair will showcase an interesting array of electrical products and applications that are of special interest to electrical wholesalers.

One of the most recognizable features at the fair will be the street luminaires that provide the general illumination for the 12½ miles of roads, bridges and promenades. A total of 1,400 standards will be topped by unique, modular, cubical units assembled in a variety of forms. They will look like colorful, oversized toy blocks in the air because of the combinations of pastel colored panels that fit into the metal framework of the cubes.

Hamel & Langer, the lighting consultants for the fair, designed the luminaires, and they were manufactured by Westinghouse Electric Corp. Square panel-type fluorescent lamps from General Electric Co. provide the light source (EW-Sept. '61, p.60; March '64, p.105). The lamp fits flat at the bottom of a cube and light from the top of the lamp shines through the translucent panels to provide a gay mood by night as well as day. More than half of these cubes in a typical unit house a lamp.

• **Music Too . . .** Luminaires located at the entrances, rest areas, promenades and main plazas will project continuous music from a hidden sound source. Nestled in the base of

these luminaires will be the sound system's cluster of high fidelity speakers.

The distribution service for these luminaires was planned in anticipation of the future use of the site. During the two-year operation of the fair, the special street lighting units will be powered by a 277-v secondary circuit; however, when the fair ends, the 20-ft steel lighting standards will be fitted with standard street-lighting luminaires and will be powered by a 120-v secondary circuit system. At the conclusion of the fair, the site will be a municipal park and recreation area.

The 4,160-v primary of this lighting system is fed to a wye connected 3-phase, 4-wire transformer where it is stepped down to 277/480-v and 120/208-v secondaries. About 20 lighting transformers are used and 15 of these transformer vaults will remain as permanent equipment.

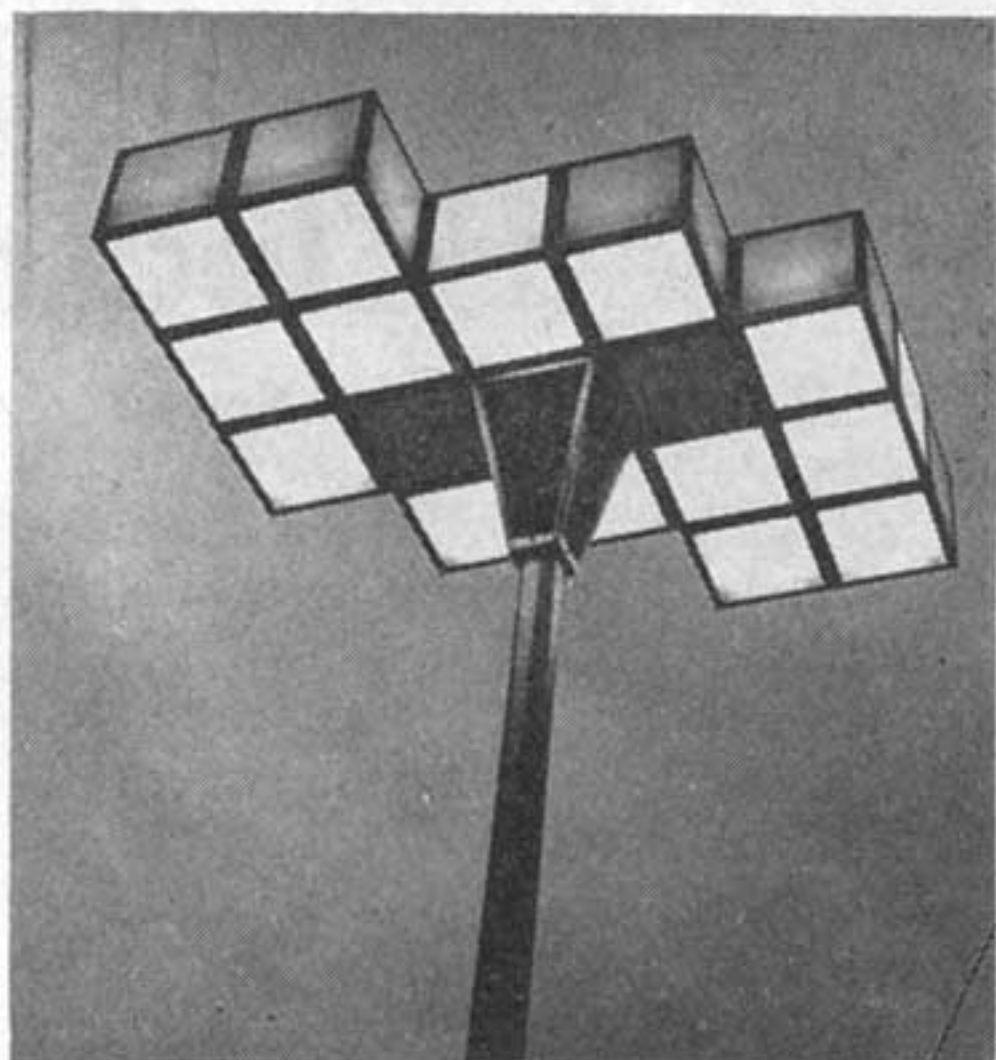
Total connected lighting load runs about 4,190 kva. Approximately 1,284 kv of this is for street lighting. Lighting levels for the entrance plazas, spectacular fountains and display areas will be higher than the street lighting.

• **Fair Center** — The Unisphere, or theme center, will be lighted by projectors and floodlights from five surrounding towers, fed from a single 350-kva transformer station.

Spectacular features, such as the Fountain of Industry, central pools



CLUSTER OF SPEAKERS are being installed by worker at center; at right a worker seats a square fluorescent lamp at bottom of the luminaire's translucent cube.



STREET LUMINAIRES at the World's Fair site will feature modular, cubical units assembled in a variety of forms and colors, manufactured by Westinghouse. Light source is a panel fluorescent, developed by General Electric.

and miscellaneous systems will consume a 1,381 kw lighting load.

Special effects lighting for outdoor statuary and other sculptured objects will use about 13-kw. Landscape lighting for trees, shrubs, flowerbeds and ground cover will take another 106-kw.

The lake amusement area will have its own brand of lighting showmanship and it has been estimated at 280-kw. Other miscellaneous lighting such as illumination of the flags along the promenade, and telephone booth lights, will take 814-kw.

• **Tower of Light**—The investor-owned electric utility industry plans an educational exhibit depicting the many applications of electricity in the home and in industry—and what to expect in the future. This "Tower of Light" will be a nighttime dazzle, with a single shaft of light projected straight up, piercing the sky with a 12-billion candlepower beam from 12 searchlights. On a clear evening the beckoning beacon of light should be visible from distances up to 200 miles. Inside the many-faceted building, which will be bathed in changing pastel shades of lights, a 25-minute musical review of electricity will unfold as one moves through seven chambers on revolving rings.

• **Cave Living** — Would-be-lovers of speleology and those not prone to claustrophobia will enjoy the features of an underground home—a "new frontier for family living" served up by a Texas contractor. This exhibit is designed to show that the way to enjoy nature unpolluted is to withdraw from it into a sunken concrete shell where climate, sunlight, seasonal atmosphere and a view from the picture window can be produced artificially in response to the home-

owner's desires. That's all-electric living!

With this concept you are protected from outside noises and burglars since the 18 windows of the house face murals, chosen to taste; when the windows are opened a breeze of purified air enters. There will be a garden pool surrounded by plants and flowers thriving on ultra-violet light. Light from the terrace ceiling will simulate sunlight or moonlight.

● **Westinghouse**—The Westinghouse Electric Corp. exhibit will encompass the past, the present, and the future. At the Westinghouse site a metal case, or time capsule, will be suspended from three triangularly placed pylons directly above the time capsule buried at the 1939-40 World's Fair. The new capsule will contain a variety of objects typical of life in this decade. At the base of each pylon will be a circular exhibit area; these areas will display the contents of both capsules and offer a peek into the future.

● **Ford** — Look for more lighting finesse at the Ford Motor Co. site where a "Wonder Rotunda" will be the focal point at one end of the company's seven-acre location. This rotunda is formed of slender pylons over 100 ft high that curve inward at the top. At night the pylons will be brightly illuminated with a "waterfall of light."

Inside the Ford exhibit a "magic skyway" ride will take the traveler back to prehistoric times by means of an animated tableau, and then whisk the visitor forward for a glimpse of a "space city of the future."

The skyway ride will be in Ford-built convertibles. However, the propulsion system for these cars (they have no engines) will be an industrial sales manager's dream, because the ride is electrically powered from hidden wheels.