NEW YORK CITY BICENTENNIAL

"NEW YORK 1776"

OVER

"NEW YORK 1976"

## A. SCOPE

1. Two hundred years ago, our national leaders and the American people created a nation from a philosophy.
2. In 1976 the United States will celebrate the anniversary of that memorable event.
3. This proposal recreates the City of New York in "1776" in three dimensional model form, and suspends it over the presently existing "1976" three dimensional model of New York City.
4. The visitor, both public and student will be able to view American history as it was lived in 1776 and compare the physical aspects of the Past and Present in an exciting and unique presentation. It will be both an educational and emotional experience.
5. The visitor from our disadvantaged rural and urban areas will be made aware of our humble beginnings.
6. It is a unique proposal and will provide an example for other cities to adopt for themselves.

## B. PURPOSE

1. This proposal is for a Community Educational Program in its broadest sense.
2. To increase the public's awareness of its existence in the Past (1776) and the Present (1976).
3. To educate through a "Real Time" three dimensional historical project - the public and the student at all educational levels, public, high school and college.
4. To provide the City of New York with both a "Bi-centennial" exhibit and a permanent exhibit in conjunction with the Past (1776) model and the Present model (1976).
5. To show what New York City looked like in "1776" and to allow the student and public to compare it with the present city.
6. To show the growth of the city as a Past-Present device with sound and light animation so that an exciting period in our Past history is as memorable as man's first step on the moon.

## C. PLACE

1. The New York City "1939" and "1964" World's Fair Pavilion in Flushing Meadow Park.
2. The Geographical Center of New York City.
3. The Present Model of New York City "1974"
   a. In 1964 the Mayor of New York authorized construction of an engineering and planning model of New York City "1964" as a permanent device.
   b. The model became the New York City 1964 World's Fair Exhibit in conjunction with the Museum of the City of New York's "1664" New Amsterdam model.
   c. The two models celebrated the 300th anniversary of the city.
   d. The 1964 model cost $700,000.00.
   e. The 1964 model is 15,000 square feet in size.
   f. The 1964 model is an accurate topographical, three dimensional map of New York City.
   g. The 1964 model has 865,000 individual detailed accurate buildings on it.
   h. The 1964 model is an accurate replica of the real

C. PLACE (continued)

3. h. (continued)

city - see photo enclosed.

4. This vast device, the largest and most detailed in the world is continually updated so that the "1964" model is accurate in "1976".

5. Sixty thousand man hours were required to build, twenty thousand of which were research and engineering.

6. Two thousand public buildings are animated with distinct light codes controlled from a console both automatically and manually, so that all fire houses light in red, all police stations light in green, all schools light in white.

7. A Lowell Thomas recording presents all the cultural and civic activities via sound.

8. Two thousand school children visit this building each week.

9. Hundreds of city planners, public officials, architects and engineers use the device to assist in their planning.

10. Transportation, railroad, subway, highway systems are depicted.

## D. PROPOSAL

1. To design, research, engineer and build a three dimensional model of New York City as it existed in "1776".
2. To suspend the "1776" model ten feet above the presently existing "1976" model.
3. To depict in three dimensions the topographical map of New York in "1776".
4. To depict the water lines of the harbor and rivers in "1776".
5. To depict the city streets as they existed in "1776".
6. To depict all public and private houses and other physical aspects of the man made culture.
7. To accentuate by light animation the public buildings as they existed in "1776.
8. To have a duplicate model of New York City - in the same scale - "1776" over "1976".
9. To present to the visitor, through sound and light animation, the exciting historical moments of New York "1776".

## E. PROJECT DETAILS

1. Historical research, source materials will be gathered from:

   a. Museum of the City of New York

   b. The New York Historical Society

   c. Long Island Historical Society

   d. Staten Island Historical Society

   e. Bronx Historical Society

   f. New York Public Library

   g. New York City Archives

   Estimated cost - $18,000.00

2. Three Dimensional Topographical Map from Above Research

   a. Scale - 1" = 100' (same as "1976" existing model)

   b. Area covered in lower Manhattan - Battery to Canal Street - four square miles.

   Estimated cost - $35,000.00

3. Street Layout

   a. To be derived from the Archives.

   b Superimposed on the topographical map.

   Estimated cost - $12,000.00

## E. PROJECT DETAILS (continued)

4. City Buildings

   a. All model buildings will be built from Archives data.

   b. Roof style, chimneys, window character will be detailed and historically accurate.

   c. Approximately three thousand individual public and private buildings will be required.

   Estimated cost - $25,000.00

5. Rural Buildings

   a. Outside the "1776" New York City environs - "Battery to Canal", all known buildings of a historical character will be at a larger scale - 1 : 48.

   b. This will include all present five boroughs - Manhattan, Brooklyn, Queens, Bronx, Staten Island.

   c. An example, Van Cortland House in the Bronx - approximately 100 buildings.

   d. Each historical building would be suspended ten feet above its correct location on the present "1976" model.

   Estimated cost - $22,000.00

E. PROJECT DETAILS (continued)

6. Light Animation

a. Each of the large scale five borough models will be individually spotlighted with both manual and automatic punched tape controls.

b. The Manhattan model will have similar spotlighting for its historic buildings.

c. Ultraviolet overhead lighting to create an animated night scene will be ceiling mounted.

d. High intensity lamps to duplicate sunlight effect will be ceiling mounted.

Estimated cost - $19,000.00

7. Sound Animation

a. Audio equipment will consist of both individual "visitor control" units, hearphones, and visitor group units using speakers.

b. A console will be engineered and built to house the tape drive units and to coordinate the visitor's audio demands at various locations around the historical "1776" Over "1976" exhibit.

c. "Historical Script" (research data from the

E. PROJECT DETAILS (continued)

7. c. (continued)

Archives), writing, recording, sound effects and appropriate musical background.

Estimated cost - $17,000.00

8. Installation

Estimated cost - $25,000.00

9. Design and Engineering

Estimated cost - $15,000.00

10. Building Modification

Estimated cost - $10,000.00

11. Building Electrical System Modification

Estimated cost - $20,000.00

NEW YORK
THE SUNDAY HERALD TRIBUNE MAGAZINE
JULY 12, 1964

# Model City

by John Molleson

In the New York City Pavilion, just west of the Unisphere, lies one of the most fascinating—and least expensive—treats at the World's Fair: An elaborately detailed, magnificently scaled model of New York City itself. From the southernmost tip of Staten Island to the farthest reaches of the Bronx, every bridge, housing project, private home, hotel, tenement, church, hospital, skyscraper, dock, museum, street, park and parkway within New York City limits is faithfully reproduced on a scale of 100 feet to the inch.

For just a dime, visitors to the pavilion can board a moving gondola that simulates a helicopter flight as it moves round the 18,000-square-foot model. For one New Yorker, straining for a glimpse of his own block as well as the whole city, the six-minute ride was not long enough. But at the end of the ride, the moving gondola rises to a balcony where, debarking at a simulated 9,000 feet, the visitor can stand as long as he likes to study the awesome view he has there of five boroughs, two rivers and a bay. Indeed, he can spend simulated days and nights there; the model grows dark periodically and is animated with many hundreds of twinkling lights.

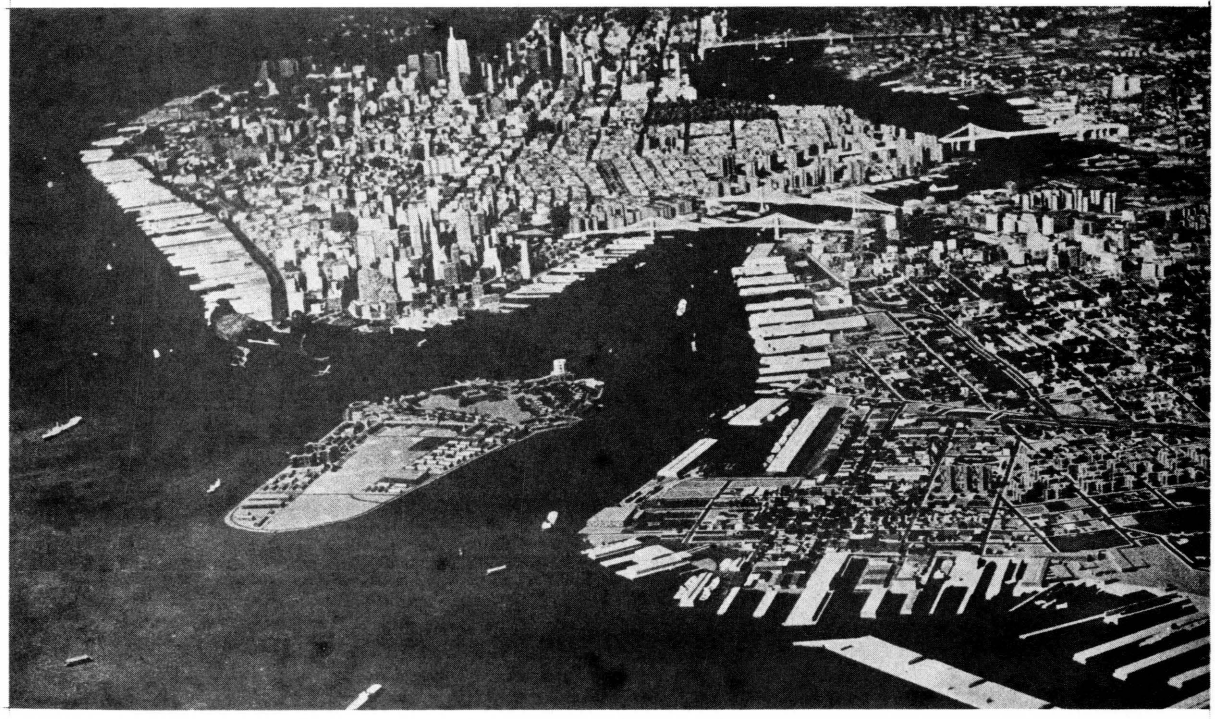
The model was built at a cost of $800,000 by Raymond A. Lester Associates, of Thornwood, N. Y., at the suggestion of Parks Commissioner Newbold Morris. It is up to date as of January 1, 1964. (Raymond Lester guesses it would take five men working nearly a month to keep up with the amount of new building in New York each year.)

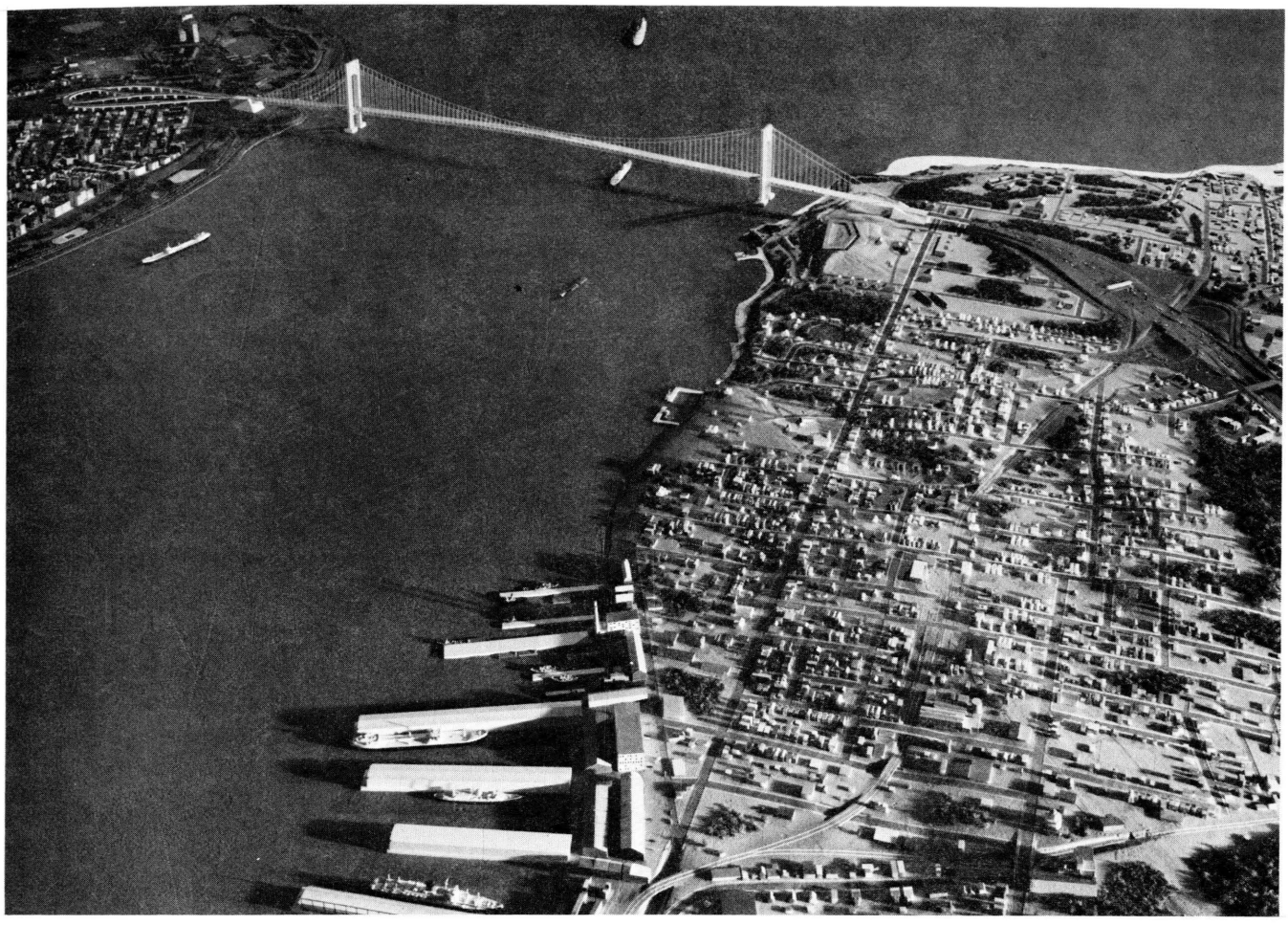
It took 30 men three years to construct the model. By far the hardest part of the job, according to Mr. Lester, was the labor involved in gathering information. In addition to maps, aerial photographs, and architects' plans, they depended on almost daily observations (especially of Manhattan) to stay current.

Their work produced all sorts of staggering numbers. There are a total of 835,000 buildings in New York, Mr. Lester reports, and that is the number on view in the model. Without a Pharaoh's manpower resources, Mr. Lester divided the city's buildings into three classes to get his model built. In one category were New York's 47,000 tenements, 75,000 brownstones and—count 'em—500,000 private homes (ranch-type, semi-detached, etc.); all these models were more or less mass produced, many of them by injection-moulding on a production line. The second category consisted of structures with an important degree of uniformity. Churches, for example, could be divided into two basic types, those with single and double steeples, and, within these groups, into small, medium and large. These were cast in epoxy. In the third category fell the 100,000 structures in New York that are so unique —skyscrapers, museums, cathedrals, hospitals—that short cuts were unthinkable. Every one of these 100,000 was hand-made from plexiglass.

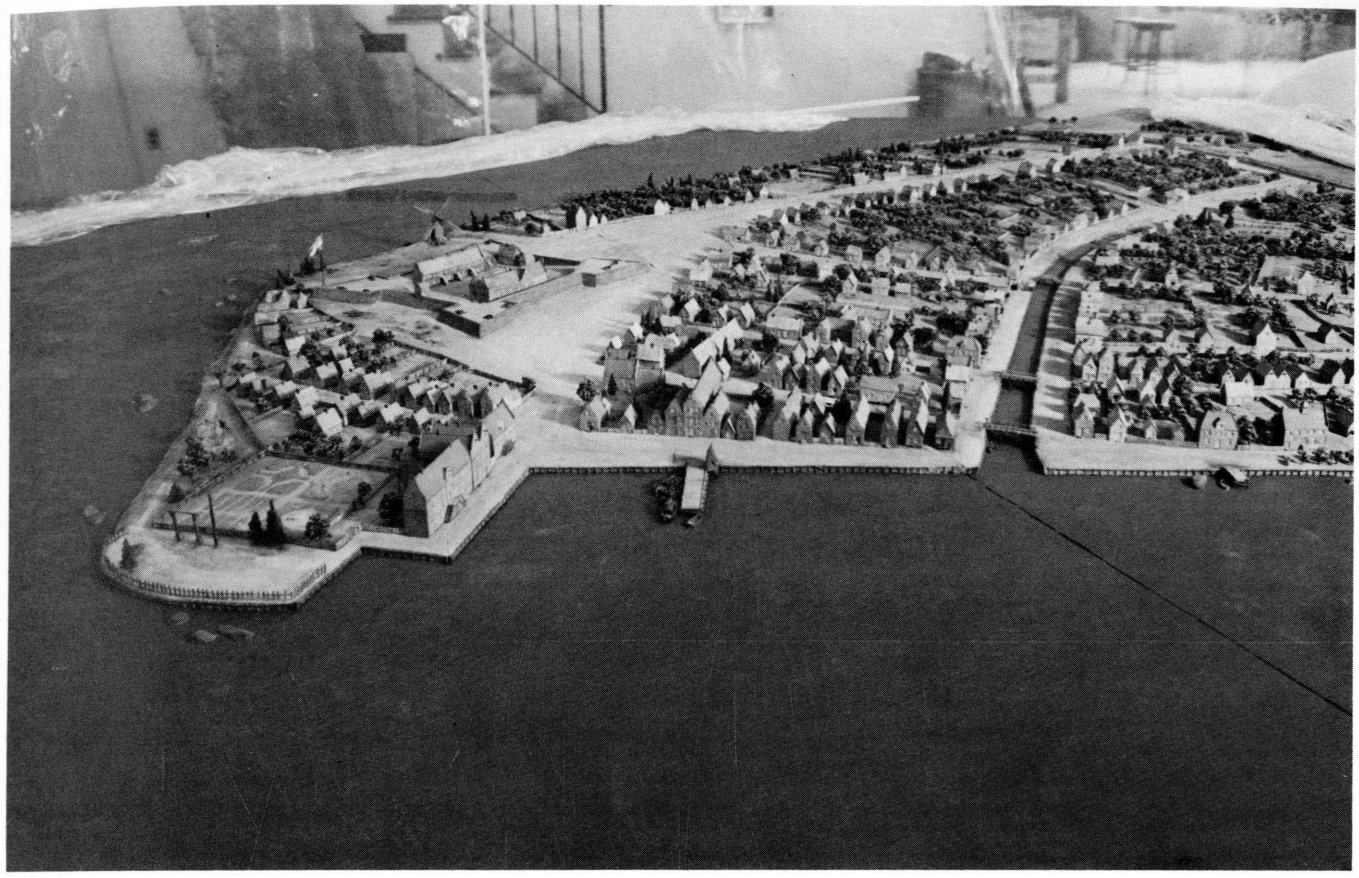
The model was built in 300 sections, each 4 feet by 10 feet, and mounted on a platform three feet high. (The height permits electricians to get under it and adjust the lights.) As administrator and prime mover of the exhibit, Newbold Morris made certain that the city's 9,000 acres of park land, 17.3 per cent of the total, are conspicuous in the model. The vivid green park sections are treated with a special type of paint that remains luminous even when the rest of the model is blacked out.

Mr. Morris hopes to keep the model in the New York City Pavilion (where it occupies space used in non-Fair years as a roller-skating rink) until space can be found for it as a permanent exhibit, perhaps in the projected Civic Center in lower Manhattan. Already it has been useful to city planners. "Not long ago," Raymond Lester said, "Paul Screvane sat down in the Hudson River to take a sight on some East Side housing." The view the President of the City Council had from there—the accuracy of the model notwithstanding—was seriously distorted: no smoke, no noise, no cars, no litter, no people.





NEW YORK CITY TERRAIN MODEL -
NEW YORK CITY INFORMATION CENTER
FLUSHING MEADOW, NEW YORK -
DEPARTMENT OF PARKS, NEW YORK CITY



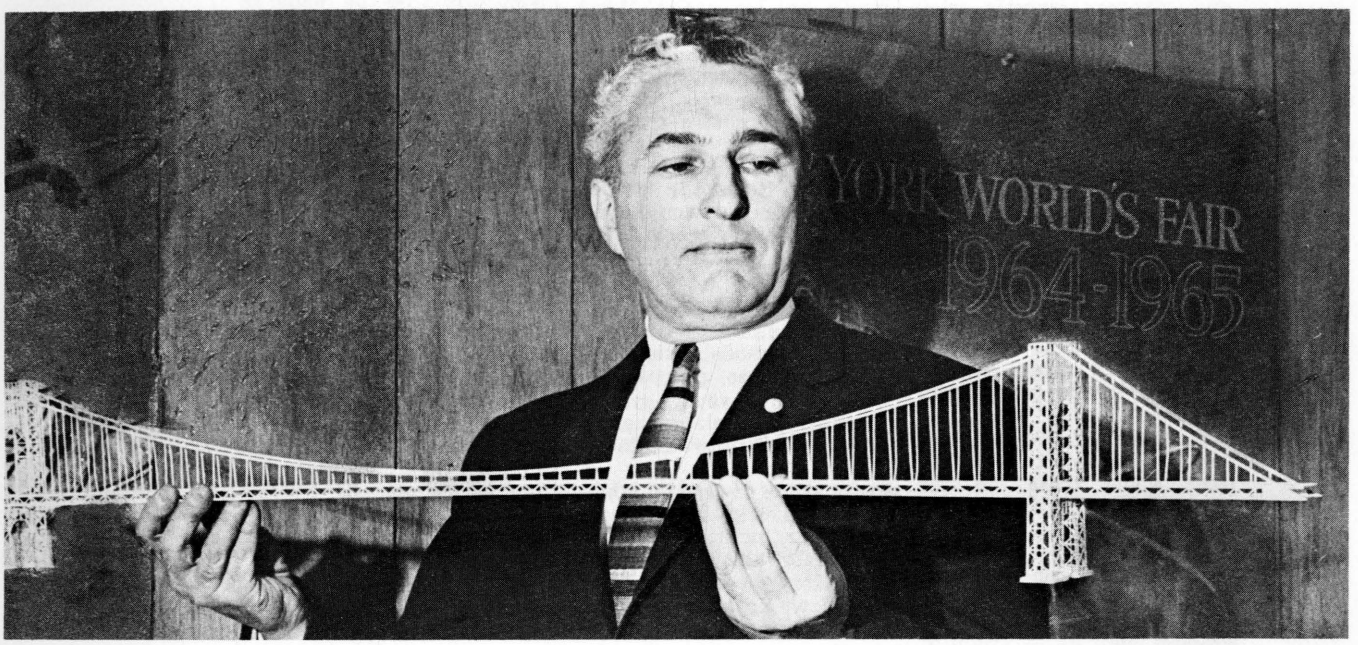
NEW AMSTERDAM "1664", FOR NEW YORK WORLD'S FAIR TRICENTENNIAL CELEBRATION, NEW YORK CITY "1664" - "1964"

LESTER ASSOCIATES, INC.

THE QUEENS MUSEUM NEW YORK CITY BUILDING, FLUSHING MEADOW-CORONA PARK, FLUSHING, NEW YORK 11368

This remarkably detailed model of the five boroughs of New York City, built to a scale of 1" = 100', fascinates thousands of visitors to the New York City Building at Flushing Meadow each week. The model is also an accurate tool for the planning and development activities for the Parks and Highway Departments

Close-up view of the model showing lower Manhattan and Battery Park.




This picture of Raymond A. Lester "holding the George Washington Bridge" gives a good idea of the model scale and size.

An aerial view in miniature - looking south on Manhattan Island.

## Today's Architecture

# A Model City Needs A City Model

By WOLF VON ECKARDT

WASHINGTON — A good way to start building a model city is to build a city model—a scale model of the entire city that would show everyone, including school children, housewives, home owners, builders, officials and planners, exactly what the city looks like now and how new plans and proposals for any given area would affect it in the future.

This idea was proposed some time ago by Lewellyn A. Jennings, chairman of the Federal City Council, as a means to bring the weight of public opinion to bear on the solution of planning problems and to make the "planning with people," everyone talks about, more practical and effective. Jennings asked for "a giant model of the city that people can inspect and dream about."

To make our voice effective and constructive we all must know what we are talking about. This is often difficult—and not only for laymen—on the basis of blueprints, charts and drawings, let alone the planners' jargon. Models of individual projects help us to visualize only that one project. It does not show us how we get there, where the nearest schools and shops are, or how it would affect its surroundings.

The idea for a model of an entire city is not new. Memphis, Tenn., has recently built such a model of its entire downtown. New York City has one, covering all its five burroughs, on public display at Flushing Meadows, the former World's Fair grounds. There are other smaller ones, too.

Such a model would be built to a scale of one inch to 50 feet. In Washington, that would mean that a model for the entire district would take up about 88 feet square. The Washington Monument would show 10½ inches high. At this scale you would conveniently view the city as you would from a low flying helicopter.

All the important buildings would be shown as exact miniature replicas, their actual colors and all. Small homes might just be blocks in the correct size, shape and color. But it would, of course, be possible to show all the details on the street, down to the last fire hydrant.

If such a miniature Washington were built, the planning and fine arts commissions might require that the builders of every major proposed structure furnish a model of it in the proper scale. The model would then be dropped in place and everyone could see the change in the cityscape for better or worse.

As the builder of the New York City model, Raymond A. Lester, has proposed a continuous conveyor system of small gondolas, seating four people each, would move a tape recorded voice deslowly above the model while scribes the trip which lasts about four minutes. A small charge for the ride would help defray the cost.

In New York, Lester has provided telescopes so you can focus in on whatever section you want to study and rejoice when you find your house.

There are also ways to show what goes on in the city. In New York, for instance, the model shows all city-owned housing in a special color and the amount of it is astounding. Push a button and little red lights show all the fire stations, green lights show police stations, white ones hospitals and so forth. You can see where the schools, the parking lots, the recreation centers and other vital services are distributed and how the traffic moves.

The model of downtown Philadelphia which had a great deal to do with gaining support for that city's much praised urban renewal program, first shows the city as it was. As you push a button certain sections flip over and show what they will look like after they are rebuilt. But a model can help study and intelligent decision making as well as information, education and propaganda.

You can, for instance, project colored lights and animated charts on the model to show such factors as changing income, racial distribution and other demograhpic facts and trends. You could show the movement and intensity of traffic flow, present and future, and thus see at a glance what problems are likely to develop. A computer could keep the information constantly up to date.

In New York, both Mayor Lindsay's and Robert Moses' differing proposals for new freeways are shown on the model to help the people of the city make up their minds which one they prefer. A new housing project at Brooklyn Heights was considerably changed when it became clear on the model that the first design would damage the skyline.

The model saved the engineers retained by the archdiocese over $100,000 when they set out to install a central closed-circuit educational television network for the city's parochial schools. The model showed them the building heights and clearances in the path of the net without elaborate surveys on the city streets.

Avoidance of just one costly mistake might pay for an entire city model which would cost about $1 million without the building, of course.

As one city planner said, any child who has been to a planetarium knows more about the universe than he knows about the city in which he lives. A city model would remedy this. It could be an important educational tool, a self-liquidating tourist attraction as well as a potent device to make city planning more effective.

The Washington Post

# FEATURES OF THE

# NEW YORK CITY MODEL

## A. WHO ARE THE PEOPLE WHO HAVE WORKED WITH THE MODEL?

1. City Planners

   New York City Planning Commission,
   W. Ballard, Chairman

2. Architects

   D. Chait; Skidmore, Owings & Merrill;
   Kelly & Gruzen

3. Civil Engineers

   Madigan-Hyland, Inc.; Andrews & Clark

4. Lawyers

   Gladstone and Lowell

5. Photographers

   Campbell Studios; Allen B. Howard & Associates, Inc.

6. Educators

   New York City Board of Education,
   B. E. Donovan, Superintendent

7. NewsMedia

   Herald Tribune; Look Magazine

8. City Government

   Mayor of the City of New York
   Hon. John Lindsey; Hon. Robert Wagner

   Office of the President of the Boroughs of Manhattan, Bronx, Staten Island, Queens and Brooklyn

A. 8. (Continued)

New York City Police Department, Fire Department, etc.

9. Landscape Architects

Clark & Rapuano, Inc.

10. Communication Engineers

Adler Educational Systems Div., Teleprompter Corp.

11. General Public

B. CHARACTERISTICS OF THE MODEL AS A WORKING DEVICE

1. The Model is constantly being updated to incorporate new construction and eliminate structures that have been demolished.

Example: Removal of Penn Station and substitution of New Madison Square Garden and Penn Plaza.

2. The Model is a true geographical representation of the New York City area. The terrain is accurately contoured and every building is represented in 3-D form. There are 854,635 buildings.

3. The Model may be walked on, thus permitting a close-up view of any area by a person or a group of people. Over 1000 people have actually walked on the Model in the process of using same. This does not include over 3 million visitors who have viewed the Model from peripheral viewing facilities.

## C. HOW IS THE MODEL BEING USED?

### 1. As an Information Tool

a. By actuating the proper switch at the remote control console the following items can be independently shown on the map:

(1) Schools - Elementary, High Schools and Colleges (870 facilities)
(2) Fire Department (251 facilities)
(3) Police Stations (123 Precincts)
(4) Parks and Recreational Centers (1991 facilities)
(5) Courts and Penal Institutions (53 facilities)
(6) Health Centers and Hospitals (113 facilities)
(7) Libraries (186 facilities)
(8) Museums (25 institutions)
(9) Sanitation Department (265 facilities)
(10) Water, Gas & Electric (20 facilities)
(11) Public Housing (131 projects)
(12) Welfare Centers (219 Centers)

### 2. As a Planning Tool

a. Future Housing

Example: Studies of the New Trade Center Complex by Port of New York Authority

b. Future Highway Possibilities

Example: Proposed Cross-Manhattan Highways are superimposed on the existing conditions in a temporary mode to study structures effected and impact on environment.

c. Sight Line Study for Closed Circuit TV throughout the City.

Example: Study of TV line of sight transmission interference for proposed Educational TV System for New York City Parochial School System.

C. 2. (Continued)

d. Traffic Pattern Study

Example: Evaluation of one way street modification - Traffic Commissioner H. Barnes

e. Future Fire Station and School Sites - selection based on location of new private home developments in Staten Island

f. Police Protective Programs - Studies to determine most suitable routes and protection overlook points at occasion of VIP visitors.

3. As an Educational Device

a. Pointing out the size of the City of New York to thousands of people and especially school children.

Example: Over 50,000 students have visited the Model on formal class trips.

b. The Entire City (all five boroughs) can be viewed from a single position.

c. Many human interest stories have been written about the map.

Example: Readers Digest

4. As a Publicity Tool

a. The Model has been filmed for advertising such as TV commercials, etc.

Example: First National City Bank of New York

b. City improvement and city planning movies have been made.

Example: A. Andrews - "Once Upon a Dump"

C. 4. (Continued)

c. Local areas have been photographed for Community Improvement Projects and Brochures.

Example: New York City Parks Department

d. Over 3 Million people have visited the Model and paid admission.