



Regional Plan Association is a nonprofit citizen organization which has been working since 1929 for the efficient and attractive development of the Metropolitan Region surrounding the Port of New York and for expanding opportunities for all its residents.

The Study Area, shown at the left, is the geographic context of the Association's current work on a Second Regional Plan, a successor to the pioneering Plan of New York and its Environs of the 1920's. The Study Area is deliberately drawn larger than would be required to accommodate the most extensive of several development patterns being evaluated for the year 2000, the time horizon of the new plan. The area includes 31 counties in New York, New Jersey and Connecticut with a population in 1965 of 19 million and a land area of 12,748 square miles.

Stanley B. Tankel, Planning Director of Regional Plan Association from July 1, 1960 to his untimely death, March 31, 1968, led in the conception of the broad outlines of the Second Regional Plan.

A major recommendation of the Plan is for creating new urban centers throughout the Region. Jamaica Center is a redevelopment prototype. Mr. Tankel was responsible not only for this Study's being undertaken but also for the widespread interest its preparation has generated. He particularly pressed for revitalized urban centers in the old Core of the Region as a lever for improving the opportunities and living conditions of the Negro and Puerto Rican poor who live near the sites of these prospective centers.

The officers, directors, members and staff of the Association appreciate Mr. Tankel's profound contribution to the New York Metropolitan Region, which he deeply loved.

FOREWORD

One of the main policies emerging from the Second Regional Plan Association's work toward a Second Regional Plan is the recommendation that activities which group people from relatively long distances should be grouped close together in a planned relationship to each other and in transportation to major centers of activity. Large centers of activity, higher education, major shopping, health services and entertainment will be desired in many parts of the New York Metropolitan Region as it grows from today's 19 million people to the 30 million projected for the year 2000.

In 1965, Regional Plan Association recommended a center at Mitchel Field, a discontinued airport in central Nassau County. The Nassau County Planning Board subsequently endorsed this proposal.

In 1967, a group of Queens County leaders who had heard Regional Plan's concept of centers and that Jamaica was considered a likely place for one such center. Jamaica was studied as a prototype of the concept for the "Greater Jamaica Development Corporation."

The Greater Jamaica Development Corporation was formed to study the feasibility of the proposed center and to make a contribution to enable the work to be carried on in more depth than would have been possible.

Preparation of the Second Regional Plan Association's Second Regional Plan is sponsored by the Association by the Harvard Public Administration (published between 1959 and 1961). The Association's analysis of progressive land use and its implications is spread City (1963).

The Second Regional Plan is a response to the earlier projections. The Plan will propose directions toward which development should be guided and will set out a strategy for alternative development.

The publication has been accepted by the Regional Plan Association's Executive Committee and transmitted to the Committee on the Second Regional Plan and the public.

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JAMAICA CENTER



Prepared by F. Carlisle Towery, with Arthur Zabarkes, assisted by Dietrich Kunckel and Philip Israel, with special studies by Boris Pushkarev and Salvatore E. Manzo. Supervised by Stanley B. Tankel and Heman B. Averill, and edited by William B. Shore. Cosponsored by the Greater Jamaica Development Corporation.

A REPORT OF THE SECOND REGIONAL PLAN APRIL, 1968

Regional Plan Association

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FOREWORD

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FOREWORD

CONCLUSIONS

One of the main policies emerging from Regional Plan Association's work toward a Second Regional Plan is the recommendation that activities which draw people from relatively long distances should be grouped close together in a planned relationship to each other and to transportation—a new version of “downtown.” Large centers of office jobs, higher education, major shopping, health services and entertainment will be needed in many parts of the New York Metropolitan Region as it grows from today's 19 million people to the 30 million estimated for the year 2000.

In 1965, Regional Plan specifically recommended a center at Mitchel Field, a discontinued airport in central Nassau County. The Nassau County Planning Board subsequently endorsed this proposal.

In 1967, a group of Queens County leaders who had heard Regional Plan's concept of centers and that Jamaica was considered a likely place for one asked that Jamaica be studied as a prototype of the concept for the Region's “Core” (Bronx, Brooklyn, Manhattan, Queens, Hudson County and the City of Newark). This is the report of that prototype study.

This exploration of a new center at Jamaica—its potential, what it could be like, and steps needed to attain it—is one of the staff studies for RPA's Second Regional Plan. The Plan is financed by the Avalon, Ford, Rockefeller Brothers and Taconic foundations. The Greater Jamaica Development Corporation also made a contribution to enable the work in this report to be carried on in more depth than would otherwise have been possible.

Preparation of the Second Regional Plan began with basic projections of the Region's future prepared for the Association by the Harvard Graduate School of Public Administration (published in ten volumes between 1959 and 1961). The Association staff added an analysis of prospective land use and its implications in *Spread City* (1962).

The Second Regional Plan is a response to the problems identified in these earlier projections. The Plan will propose directions toward which development should be guided and will set out a strategy for alter-

ing unplanned trends in favor of patterns better suited to the Region. It will not be a rigid blueprint for the year 2000; it will be a basis for judging the long-term validity of current decisions.

Previous reports of the Second Regional Plan are **The Lower Hudson** (1966), a study of the changing Hudson River waterfront; **The Region's Growth** (1967), a projection of economic and demographic characteristics of the Region to the year 2000; **Public Participation in Regional Planning** (1967), a description of the pioneering public participation process that began with the Goals for the Region Project in 1963; **Waste Management** (1968), a projection of waste generation in the Region and a framework for rationalizing the waste handling and disposal system.

All reports of the Second Regional Plan are reviewed by a wide range of citizen groups, including the 135-member Committee on the Second Regional Plan composed of civic, business, educational, labor, professional and religious leaders. After public discussions, final recommendations will be published.

The first **Regional Plan of New York and its Environs** was financed by Russell Sage Foundation in 1922 and published by Regional Plan Association in two volumes (1929 and 1931) after the completion of ten research reports. It was the first metropolitan plan in the world.

Many of the broad development policies of the first Regional Plan, such as the expressway and river crossing system, most of the local planning standards, and many specific regional park and other projects have been carried out.

In the decade 1957-67 during which work on the Second Regional Plan was conducted, the Association was led by Harold S. Osborne, Amory H. Bradford, James S. Schoff and Max Abramovitz. Each has contributed significantly to the making of the Second Regional Plan.

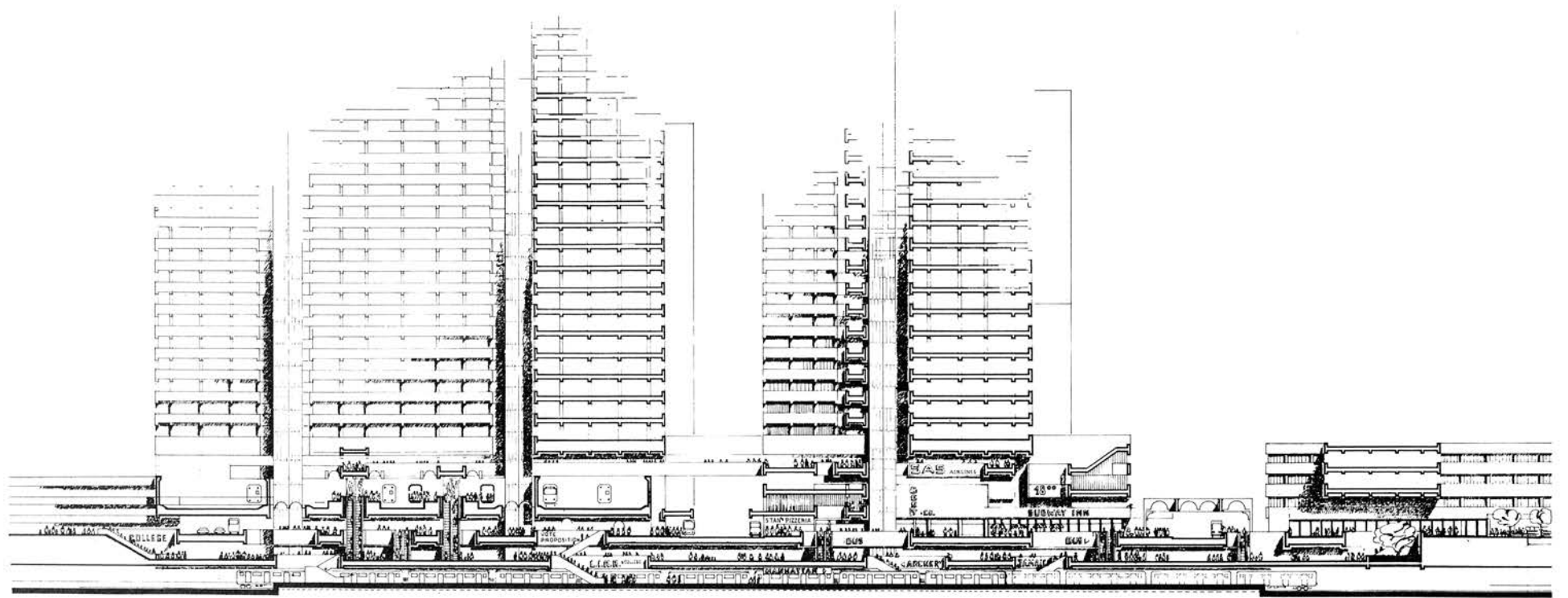
This publication has been reviewed and accepted by Regional Plan's Executive Committee for transmittal to the Committee on the Second Regional Plan and the public.

C. McKim Norton
President

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CONCLUSIONS

Basic work on the Second Regional Plan has led to the following conclusions:

1. "Regional activities," those that attract people from several miles away—universities, department stores, major health services, central libraries, government headquarters, specialized entertainment and cultural attractions—should be located together in centers served by good highways and good public transportation. Each of these centers should be accessible to a population of about a half-million to two million persons.

2. Centers in the older Core of the Region—beginning with downtown Newark, downtown Brooklyn and Jamaica (Queens)—should be emphasized now because:

a. There is excess capacity in public transportation and other public facilities there.

b. Centers would increase tax revenues for the poverty-stricken older cities.

c. They would provide nearby jobs and services convenient to major low-income Negro ghettos which adjoin or encircle these three potential centers and other possible center locations in the Core.

d. They would retain the concern of middle-income whites for the older cities, whether they live in them or not, and provide an incentive for them to live there, keeping the growing separation of rich and poor, Negro and white, from becoming an unbridgeable chasm.

After testing these conceptions in Jamaica to see if they really could be applied, Regional Plan has concluded that:

3. Jamaica has tremendous potential to become a great subcenter in the Region and the major focal point for life in the Borough of Queens.

4. Enough key people—government, business and

local leaders—recognize this potential so that progress toward it already is beginning.

5. There is enough land readily available in Jamaica so that development can begin quickly with very little dislocation of present residents and employees. Altogether, the number of acres needed for development is considerably less than the number of acres presently vacant or that could be cleared without serious dislocation problems.

6. Tax returns to the City—from office jobs not likely to locate there without a planned subcenter in Jamaica—would equal many times the extra City costs involved in building a handsome and busy center there.

7. Day-to-day attention must be paid to two urgent issues:

a. Transportation improvements on the Long Island Rail Road and the Queens subway system should be geared to the Center's needs—eliminating the BMT Elevated tracks over Jamaica Avenue, providing transit service to South Queens, providing service to Kennedy Airport with a stop in Jamaica, locating subway and railroad stations in Jamaica Center so that office buildings and other major activities are closely related to them and are within walking distance of each other.

b. York College and the New York Medical College, now seeking sites, should be located in Jamaica.

(Other important issues are set forth on pages 55 through 58.)

8. Leaders of the surrounding neighborhoods should be urged to take part in the planning and execution of Jamaica Center.

9. Actions taken should be timed and publicized so that there is a clear sense of dynamism—the public must have the strong sense of a "change at Jamaica."



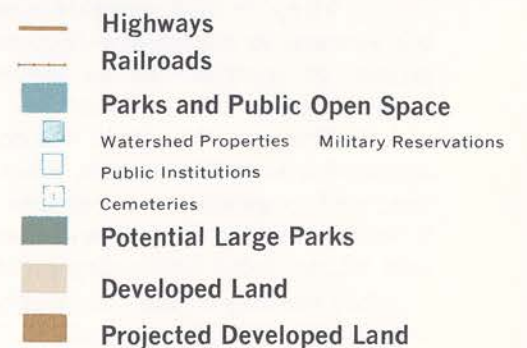
Map 1

CENTERS ON LONG ISLAND

The geography of Long Island, the present pattern of development and the existing rail and expressway system suggest the appropriateness of a few large, urban centers down the middle of the Island. Pilgrim State Hospital and Mac Arthur Field are sites which have not been carefully studied by Regional Plan Association but appear to have characteristics appropriate for center development. Major development of the middle of the Island would help keep the water-fronts for open space or sparser development. There might also be a sub-system of several smaller centers on or near Great South Bay and several to the north of the Island's central spine.

Long Island has traditionally placed great reliance on its railroad passenger service. This is likely to continue. The shape of the Island channels much of the traffic into an east-west flow headed to and from Manhattan. But the densely populated areas of Queens and Brooklyn make it difficult to get through by auto and the narrowness of the Island makes it improbable that enough east-west roads can be built to handle the traffic that will develop as the Island's population increases. Thus the railroad's significance will increase as population increases. It will have great effect on the location of centers on Long Island.

Jamaica, as the collecting point of all but one of the Long Island Rail Road's lines, is therefore one of the best sites for major redevelopment.



1. WHY CENTERS?

Mutual attraction of regional activities

Many regional activities tend to locate near each other. This grouping is usually at key transportation points. The historic pattern of development in the Region—indeed the existence of cities—is evidence of this. The gradual addition of cultural facilities, offices and other major activities to highway-oriented suburban shopping centers is evidence that this need for close grouping has been affected but not eliminated by the automobile. The common needs and mutual support of related activities continue to cause them to seek locations near each other. Office buildings create a need for employee services—banks, shops, restaurants—and for business services—supply stores, equipment sales and rentals, printers, professional consultants. Government offices attract law offices. Courts attract bail bondsmen. Department stores attract specialty shops. Movies attract coffee shops. This grouping testifies to people's preference for engaging in several activities while on a single trip.

Advantages of planned proximity

These routine, ordinary activities, when collected and multiplied, form a busy and exciting place which attracts large numbers of people doing a large number of things. The presence of workers, shoppers and visitors gives life and atmosphere to a place, which in turn attracts more activity. Because this kind of center, traditional as it is, expands choice and convenience, it is still the most dynamic and worthwhile place for many major activities of this urbanizing region to locate.

But after World War II, as highways were quickly built and automobiles increased, many of these facilities were not located in sufficiently close or planned relation to each other to achieve this liveliness and other benefits of large size and planned proximity such as:

1. Convenient meeting for persons involved in frequent face-to-face relations.
2. Support for public transportation.
3. Opportunity for many people to live close to their work if apartments are planned along with the center.
4. Availability of supporting services, such as restaurants, messengers, printing, letter services.

5. Easier comparison shopping and multi-purpose trips, making errands easier and stimulating people to do what they otherwise might not bother with, e.g., taking part in adult education or job training, visiting a museum or attending a concert.

6. Adequate market area for a facility to achieve an optimum size; for example, hospitals that offer a wide range of services or certain cultural attractions which require large numbers of people to support them.

7. Chance for informal meetings, finding the unexpected, more excitement, variety and interest.

8. A focus for the political and civic life of the large community that will use it.

Furthermore, when these facilities are grouped in business centers, residential areas elsewhere can remain quieter, with fewer local traffic problems. Development pressures on outlying open space will be reduced.

The idea that urban regions should be developed around new commercial-educational-cultural-health centers is gradually becoming accepted by planners.¹ It was also well received when presented by Regional Plan Association to the Committee on the Second Regional Plan, a group of 135 distinguished leaders brought together by the Association. Several hundred participants in the Association's 1967 annual conference, from whom written questionnaire responses were received, also responded favorably.

Subcenters in the New York Region

The New York Metropolitan Region is becoming so large that Manhattan can no longer provide the usual "downtown" activities for everyone. Already, 19 million persons are living in the 13,000-square-mile area under study by Regional Plan, and this population is expected to grow to 30 million by the year 2000.

While population is growing, there will be a shift away from factory employment to offices. Of the 7.8 million total jobs in the Region, 1.9 million are in factory buildings. These kinds of jobs are likely to increase only slightly, to 2.0 million, between 1965 and the year

¹See, for example, Kevin Lynch, "The Possible City," a paper to the 1967 American Institute of Planners conference; and David A. Crane, *Planning and Design in New York*, a report to the Mayor of New York, September 1966.

2000. In contrast, jobs in office buildings will nearly double, from 1.6 million at present to 3.0 million.

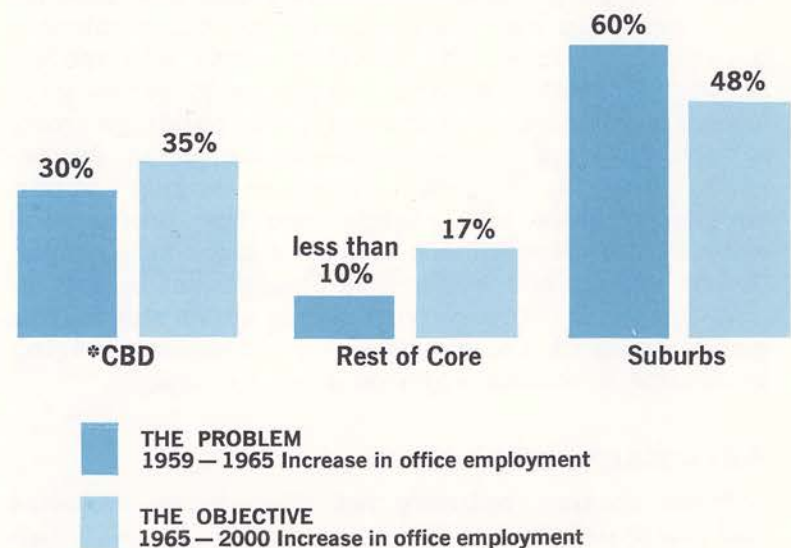
Growth in population will mean significant increases in other urban activities and services such as hospitals (about 125 more), department stores (about 50 more), universities (places for about 1.3 million more students), museums and theatres (some 30 more of each). Because these urban activities serve large numbers of people, generate much movement and have widespread physical, social and economic impact, their new locations (along with transportation facilities) will be dominant factors in shaping the Region and will be critical to its efficient, orderly and pleasant development.

Without new and enlarged centers, many office jobs may not locate in the Region at all. Many residents will not have certain facilities available to them—for example, a music hall, theatre, a first-class museum. Other facilities will not be convenient to many people—for example, universities. Such facilities as department stores or hospitals will be of lower quality than if they were in a large business center. Rail and subway transportation will be limited almost entirely to Manhattan service, and bus service will not be widely available outside the cities.

Perhaps two dozen centers should be started or enlarged over the next thirty-five years. Some of the proposed centers would be enlargements of current business areas. Some would be completely new.

Emphasis on the Core. The idea that emphasis should first be placed on centers in the old Core of the Region also has been well received by many groups. This is primarily because enlarged and renewed centers in the Core could stand against the threatened apartheid of Negro and white, warned of by the President's Commission on Civil Disorders; because they would provide nearby jobs and needed services for low-income Negroes living adjacent to or near these potential centers and thereby help relieve the frustrations in the Negro ghettos, emphasized by the New Jersey Governor's Special Commission on Civil Disorders; and because they would add to the hard-pressed cities' tax base.

DISTRIBUTION OF NEW OFFICE EMPLOYMENT



The Core outside Manhattan's central business district (CBD) has been receiving a relatively small share of the office growth. Office employment of the types which do not need to be in Manhattan have, in recent years, frequently been located outside New York City, Newark and Hudson County because there is no suitable in-Core alternative to Manhattan. It would be wise to moderate this trend by encouraging the location of more office jobs in the Core outside the CBD.

The reason that many of these new jobs have not located in the Core is because there has been little effort to provide there some attractive alternatives to suburbia. This is unfortunate because there are several highly accessible places within the Core which are excellent for large scale office development.

Scattering these jobs in the suburbs is a threat to the efficient functioning of the Region, and to the quality of the environment. It is also unfortunate for employees who, because of relatively isolated locations, generally have less choice of jobs and fewer things to do during their lunch and after working hours.

The Core outside the CBD has about 345,000 office jobs, or 22 percent of the total in the entire Region. The CBD, with 52 percent of the total, has about 800,000. The rest of the Region, outside the Core, has 410,000, or 26 percent.

*Manhattan below 59th Street

“There is an urgency for action....We must make consideration of transportation a major item in our development and redevelopment schemes. It is wasteful, if not tragic, to see areas where good transportation exists not being redeveloped, while vast complexes of residences or shops or industrial facilities are built first and then belatedly transportation is demanded.”

Dr. William J. Ronan

Chairman, Metropolitan Transportation Authority



MORE JOBS IN THE REGION'S CORE

Regional Plan Association recommends that in the next three decades, office jobs should be increased by about 235,000 in the Region's Core outside Manhattan's CBD (shown in brown on the map at left).

The Core is well equipped and located to handle a major part of the huge increases in office jobs and other regional activities which RPA projects for the Region. Places within the Core have significant capital investments already in them and are extremely accessible to workers via mass transit with adequate capacity. Major rebuilding in the Core would be wise not only from the functional standpoint; it also would make white-collar career opportunities more readily available to the urban disadvantaged, who mainly live in the Core, it would offer service jobs for the unskilled, and it would increase the stake of the middle class in the inner city.

Of the new offices recommended for the Core, some of those in the local category will be dispersed. But employers of most of the added 235,000 office jobs will be seeking central locations from which to draw their workers and serve wider markets than one or a few neighborhoods. These jobs should be encouraged to locate in the largest centers in the Core—Newark, Downtown Brooklyn and Jamaica.

Smaller centers like Jersey City, South Bronx, 125th Street in Manhattan, Flushing and Long Island City should also be enlarged with office employment.

All of these places, large and small, have the capacity for new growth. But all have environmental deficiencies that are limiting their attractiveness. Hence, they are not competing well for office jobs vis-a-vis outlying areas. Among them, Jamaica is ideally located for such competition.

Many employers who would find Jamaica unsuitable now, despite its good functional location, could be attracted to a Jamaica Center which provided a good, prestigious environment and an opportunity for corporate distinction.

Map 2



Map 3

JAMAICA AND ENVIRONS

2. WHY JAMAICA?

White-collar work force

Accessibility—present and prospective—is the main reason that commercial, educational, cultural and health activities are likely to be located in Jamaica if basic steps are taken.

Already, there are 105,000 white-collar workers living within a half-hour door-to-door trip from Jamaica by subway, 180,000 by Long Island Rail Road (including some, but not all, of those living within a half-hour subway trip). (See Maps 5, 6, 7.) By comparison, only 153,000 white-collar workers live in all of Westchester County.

Jamaica also is the hub of an extensive bus network (see Map 4). In addition, five main arterial highways radiate from Jamaica, and it is just off the Van Wyck Expressway, a good connection to the metropolitan highway system.

The number of office workers living within a short trip of Jamaica is greater than the number living within a short trip of downtown Houston or Atlanta.¹

Table 1 shows another measurement of nearby white-collar workers of various types.

Table 1
EMPLOYED WHITE-COLLAR WORKERS LIVING WITHIN
ONE HOUR OF SELECTED DOWNTOWNS, 1960

	Jamaica	Manhattan*	White Plains	Newark
Stenographers, typists, secretaries	171,000	188,000	123,000	112,000
Receptionists, file clerks, other office clerks	240,000	265,000	164,000	148,000
Professional engineers, technical	38,000	24,000	34,000	32,000
Accountants, auditors	40,000	36,000	29,000	22,000

*South of Central Park
Source: U.S. Census of Population: 1960.

Women tend to travel shorter distances to work than men, and many Queens and inner Nassau residents would not go all the way into Manhattan to work. It seems likely that a business center at Jamaica

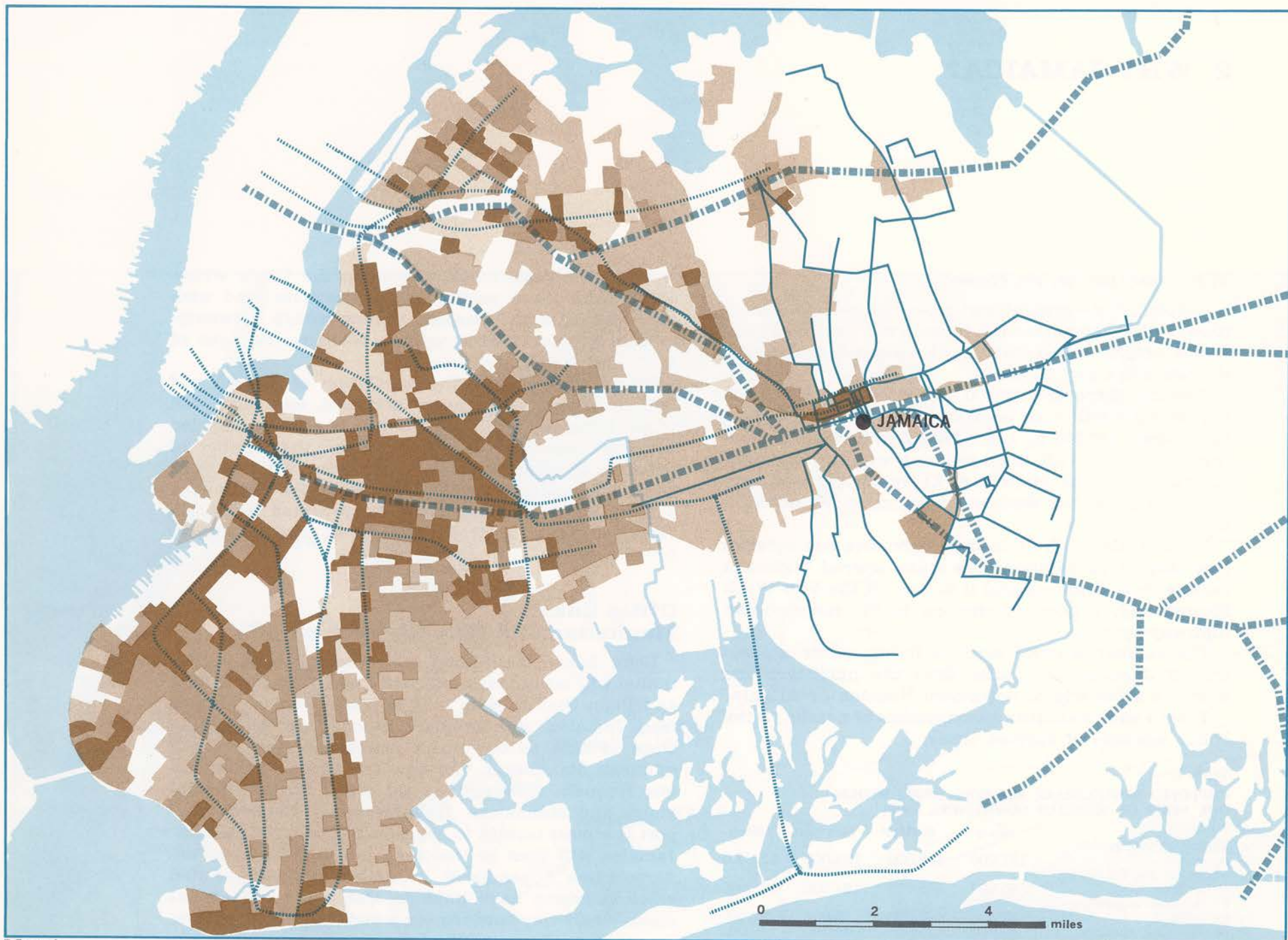
¹About 147,000 office-type workers live in Houston or surrounding suburbs and about 148,000 live in Atlanta and suburban areas, according to the U.S. Census of Population, Journey to Work: 1960.

would attract additional women to the City's white-collar work force, particularly housewives who wish to return to work. Jamaica is now within a twenty-minute trip for 100,000 women between the ages of thirty-five and sixty.

By the early 1970's, the population of Nassau and Suffolk Counties will have increased, and the speed of the Long Island Rail Road will have been doubled between many points. Consequently, the number of potential office and retail workers living within a half-hour of Jamaica will rise. Also early in the 1970's, new subway service probably will be provided for South Jamaica, greatly improving travel to Jamaica Center from there.

Office links: Manhattan and Kennedy Airport

Long Island Rail Road improvements and a new tunnel will mean that the Grand Central Terminal area and Penn Station soon will be about twelve minutes from Jamaica, with frequent trains. This is about as close in time as downtown Manhattan now is from midtown Manhattan. The new transportation will allow frequent meetings among office workers in Jamaica and Manhattan. Rail service to Kennedy Airport is almost certain to begin in the early 1970's, also. Jamaica will then be less than ten minutes from the Airport (see Appendix 5). A number of airport-related office activities have links to Manhattan offices. Jamaica—half-way between—is a good location for them. In addition, about 15,000 of the employees now working in LaGuardia and Kennedy Airports are performing tasks which do not necessarily require locations within the airports. Many of these tasks, perhaps half, are office-type jobs and could be considered candidates for a nearby office center like Jamaica. In the next decade, such airport-related jobs will increase, perhaps by 15,000. Jamaica Center should be able to attract a substantial share of these.



Map 4

JAMAICA'S PRESENT ACCESSIBILITY

Jamaica is presently well-served by public transportation. Two transit lines tap the belt of high residential densities along Queens Boulevard, between Jamaica and Manhattan. The 32 bus routes converging on Jamaica provide an extensive network of service for the areas of lower population to the east, north and south. The Long Island Rail Road serves the suburban counties farther east and provides a quick, direct connection to Midtown Manhattan.

This good transportation system will be significantly improved soon with a subway extension and with higher speeds and better service on the Long Island Rail Road.

- Buses serving Jamaica
- Subway
- Long Island Rail Road
- under 25 dwelling units per acre
- 25-50
- 50-75
- 75-100
- over 100



Jamaica is presently served by a subway under Hillside Avenue, (left) by an elevated transit line on Jamaica Avenue, (center) by the Long Island Rail Road, (right) and by the Van Wyck Expressway, (bottom). Also, an extensive bus network converges on Jamaica.

AREAS WITHIN 30 MINUTES OF JAMAICA

BY AUTOMOBILE

Persons living within the brown area can reach Jamaica within 30 minutes by automobile. This area contains a resident population of over 2 million.



Map 5

BY SUBWAY

Persons living within the brown area can reach Jamaica within 30 minutes total travel time (combination of walking and/or bus plus the subway). About 108,000 white-collar workers live in this area — most of them employed in Manhattan. Office jobs in Jamaica could attract some of these workers who would “reverse commute,” i.e., travel in uncrowded subways in the eastward direction during the morning rush hours and in the westward direction at the end of the working day.

Transit service to southeast Queens (in the direction of Valley Stream) and eastward (in the direction of Mineola) is planned by the Metropolitan Transportation Authority. These extensions will make it possible for many more people to reach Jamaica within 30 minutes by subway.



Map 6



Map 7

BY LONG ISLAND RAIL ROAD

- **At present speeds.** Persons living within this area can reach Jamaica within 30 minutes total travel time (combination of auto and/or bus plus railroad). Over 180,000 white-collar workers live in this present commutershed (including some of those living within the area of a half-hour subway trip).
- **At future speeds.** Persons living within this area will be able to reach Jamaica within 30 minutes total travel time (combination of auto and/or bus plus railroad). This enlargement of Jamaica's rail commutershed planned by the Metropolitan Transportation Authority will make it possible for many more workers, including those from areas of Nassau County, to have a short journey to work in Jamaica. But, in order to attract this growing labor force, office buildings must be located so that commuters can walk easily to them upon arrival by railroad in Jamaica.

Retailing strength and potential

Jamaica already is the fourth largest retail center in the metropolitan area that stretches from Trenton to New Haven. It has three department stores and almost \$160 million in annual retail sales (Table 2).

The three department stores in Jamaica have a combined total of 1.1 million square feet of floor space. There are about 1.5 million square feet of other kinds of retailing in Jamaica, most of it along Jamaica Avenue, some serving mainly nearby residents.

People living within twenty minutes of Jamaica Center probably comprise the majority of shoppers for the downtown. The primary trade area, shown on Map 8, is based on travel times by both public and private transportation and is modified to reflect the counter-attraction of nearby competitive retailing

areas. There are about 700,000 people (about 200,000 families) living within this primary trade area at present.

Table 2

ANNUAL SALES OF SELECTED RETAIL AREAS IN THE REGION, 1963

Center	Sales (millions)
Manhattan central business district	\$2,355.3
Downtown Brooklyn	297.6
Newark	266.8
Jamaica	157.8
White Plains	136.5
Hempstead Village	126.6
Fordham Road	104.6
Garden State Plaza, Paramus, New Jersey	98.8
Flatbush	89.1
Northern Boulevard, Queens	79.7
125th Street, Manhattan	79.0



Source: U.S. Census of Business: 1963.

JAMAICA CENTER: SHOPPING

Jamaica is the fourth largest retail center in the Region, measured in sales volume. It has the market potential for becoming a much larger regional shopping center.

At present, about 700,000 people live within a 20-minute trip of Jamaica—its primary trade area, shown on the map in dark blue. About 1,650,000 more people live within a 30-minute trip—the secondary trade area, shown in gray. Populations in both these areas are expected to increase during the next decade.

Transportation improvements, positive changes in the downtown environment, and the locating of offices, major medical and educational facilities will add significantly to Jamaica's attraction as a more active center for shopping.

 primary trade area
 secondary trade area



Map 8

JAMAICA CENTER SALES POTENTIAL FOR "COMPARISON" GOODS

AREA	POPULATION		Prospective Customers	Sales Potential (at \$500/person annual expenditure for "comparison" goods)
	1960 Census	1966 Based on Con Ed's estimated increase of 10% in Queens ¹ 1960-66		
PRIMARY TRADE AREA Area within 20 minutes of Jamaica via any of 4 modes.	644,244 persons (179,213 families)	708,644 persons	265,740 Assumptions: 1. 50% are prospective customers for comparison goods. 2. 75% of these can be attracted to Jamaica.	\$132,870,000 per year
SECONDARY TRADE AREA Ring between 20 minute and 30 minute auto travel time contour.	1,491,653 persons (314,737 families)	1,640,813 persons	164,000 Assumption: 1. 10% are prospective customers for comparison goods	\$ 82,000,000 per year
TOTAL OF PRIMARY AND SECONDARY TRADE AREAS	2,135,897 persons (539,950 families)	2,349,486 persons	430,000	\$215,000,000 —70,000,000 \$145,000,000

¹ Assumes roughly the same growth for areas of Nassau and Kings Counties that are included.

² At \$70/ft., this implies need for about 2 million additional square feet of department store space.

Many shoppers now travel longer than twenty minutes to reach Jamaica despite the development of new shopping centers geographically closer to their homes. One of the reasons is Jamaica's accessibility by public transportation, notably buses, which now carry about half of the department store customers. Other reasons may be the wide choice of goods at Jamaica, the ease with which a shopper can get from one store to another by walking, and the variety of other things to do during a single trip there. For instance, a shopper in Jamaica can easily visit the bank, doctor, library, court house, motor vehicle office, hospital, church or newspaper office. For entertainment, there are several cinemas, a live theatre, many restaurants and bars.

An enlarged and renewed Jamaica Center could expect to attract some shoppers from as far as thirty minutes away. The number of persons living in this secondary trade ring is now about 1.6 million.

If half the people in the primary trade area (within twenty minutes of Jamaica) can be considered prospective customers for comparison goods² and if most of them, say 75 percent, shop in Jamaica, about \$130 million a year would be spent there.

If, in addition, 10 percent of the population of the secondary trade area (20 to 30 minutes from Jamaica) can be considered potential department store customers for Jamaica (about 160,000 people), some \$80 million would be added. Thus the sales potential from the present population of the primary and secondary areas of an enlarged Jamaica Center totals over \$200 million. This increase of \$125 million over present annual sales of comparison goods would open about 5,000 new retail jobs.

Projected transit improvements will make it easier for more customers to get to Jamaica Center. Subway service to southeast Queens, including Rochdale Village with 22,000 residents, will bring these people to Jamaica Center within a few minutes. The new subway probably will cause an increase in population along its line.

Improvements in the quality and efficiency of bus service also would increase the shopping in Jamaica.

The presence of 50,000 additional office workers in Jamaica Center would make a great difference in the vitality of the place and hence in its retailing climate.

²Department store sales are typically "comparison goods"—goods which customers seek out and compare before buying. The annual per capita expenditure of Queens' residents for this kind of shopping is about \$500.

Many would not live in the area, but their noontime and after-work shopping could be significant. If 50 percent of these workers went out each day for lunch and spent an average of \$1 per meal, about \$6 million would accrue to the local economy each year for this one service. This implies a need for at least 2,500 more restaurant seats, about three times as many as Jamaica has now.

The majority of the new office workers would probably be engaged in clerical and secretarial duties. More than half of them are likely to be women, who often shop at lunch hour. College and medical students, staffs and teachers would also add to retail sales in Jamaica Center.

Realization of this sales potential is contingent upon several factors. Because these stores must compete with other shopping areas for the same customers, one of the most important requirements is the quality of Jamaica's environment. Sophisticated and mobile customers are often selective about where they shop. One important criterion, undoubtedly, is the shopping environment. Unfortunately, Jamaica has become unattractive. It must be made more attractive and comfortable to shop in.

Of course, image and a pleasant environment are not by themselves sufficient to attract a large number of customers. Size, variety, ease of access and habit are well-known factors in the relative magnetism of a shopping area. In comparison with the other shopping areas on Long Island, Jamaica presently has the edge in all four of these factors. Enlarging Jamaica Center would help maintain these quantitative advantages over outlying shopping centers.

Surrounding neighborhoods

Jamaica is surrounded by neighborhoods with a high ratio of home ownership. These neighborhoods can be expected to give a growing modern business center a solid base in manpower, purchasing power and support for higher education, varied cultural activities, services and entertainment.

One of these neighborhoods, South Jamaica, is presently a low-income Negro neighborhood. Although incomes there are considerably higher than those in Harlem or Bedford-Stuyvesant, the other large Negro communities in the City (Table 3), many of the residents need and are ready to avail themselves of the boost in job, education, health and shopping opportunities and

better public transportation that a large center at Jamaica could provide. They are generally young and moving upward economically. There are 60,000 residents of working age in South Jamaica, a higher ratio than for the Region as a whole. Furthermore, the neighborhood is far from stagnant. About 8,000 new dwelling units have been built in the community since 1960. In the past ten years, South Jamaica's population has increased from 80,000 to 120,000.

Table 3
SELECTED MEASURES OF STABILITY IN SOUTH JAMAICA,
CENTRAL HARLEM AND BEDFORD-STUYVESANT^a, 1960

	South Jamaica	Central Harlem	Bedford- Stuyvesant
Population	101,121	297,584	269,979
Median family income	\$6,087	\$4,299	\$4,605
College graduates per 1,000 population ^b	34.86	20.67	15.70
Home ownership ^c	62.12%	2.36%	16.61%
Crowding: dwelling units with 1 or more persons per room	12.19%	19.41%	20.82%
.75 to 1.00 persons per room	22.57%	27.94%	26.50%

^aThe three largest non-white communities in New York City as defined by contiguous census tracts of over 50 percent non-white population.

^bPersons who completed four years or more of college.

^cFor dwelling units inhabited by non-whites.

Source: U.S. Census of Population: 1960.

The residential neighborhoods surrounding Jamaica Center house the widest possible range of households—in income, age and ethnic background. There are \$100,000 houses in Jamaica Estates, \$12,000-\$30,000 houses in Hollis and St. Albans, and somewhat less expensive but well-kept houses in South Jamaica. Many new apartments have been built recently in the immediate area of Jamaica Center (see Map 9).

The unusual mixture of stable neighborhoods makes it feasible for private enterprise to invest in Jamaica. It also makes it justifiable for the City to invest there since South Jamaica does require added public services and is one of the largest Negro neighborhoods, for which the City has earmarked urban renewal attention.

All of this gives great promise that South Queens can become an upwardly mobile, prosperous and racially integrated community in the future. The middle-income development at Rochdale Village in predominantly Negro South Jamaica is successfully integrated, with 4,500 Negro and 17,500 white residents.

Further progress in South Queens is promised by the growing support of South Jamaica community organizations for the idea of a Jamaica Center and their powerful advocacy of the location of York College there. At times, Negro neighborhood organizations in other parts of the Region have opposed renewal for educational, commercial or cultural purposes.

Available land

One of the reasons that a greatly enlarged center at Jamaica is possible without much neighborhood friction is the availability of land for new purposes—much of it vacant, in parking lots and junk yards. This looseness of present development allows space for relocation within the general area. And the few houses that would have to be eliminated are all in deteriorated manufacturing districts, surrounded by junkyards and similar uses.

Altogether, about 130 acres could be cleared without serious dislocation problems if the few relocations are properly planned.

Much of this land could be available quickly. The City owns five large parking lots which should be turned to more intensive use, including parking garages. Many other tracts are owned in large parcels, making acquisition easier than it is when land is held by many owners. (Map 10 shows land from which present uses probably could be relocated relatively quickly.)

A distinct market area

Jamaica is ten miles from midtown Manhattan and ten miles from the middle of Nassau County around Mitchel Field, where most of Nassau's downtown activities are and are likely to continue to be placed. This is far enough from each center to make Jamaica relatively independent, with its own market for employees, shoppers and supporters of special activities, such as adult education or a museum.

The types of jobs and other activities that are likely to be attracted to Jamaica are not the same as those that might be located in Manhattan. Jamaica Center will attract jobs that would leave or never go to Manhattan and that do not now have an adequate alternate location in the City.

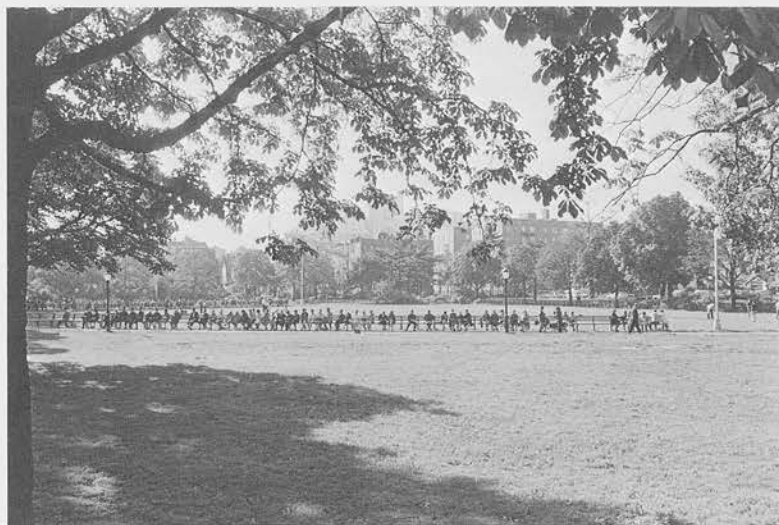
While we might expect competition for office jobs among potential centers outside Manhattan—for example, between downtown Brooklyn, a new Nassau Center and Jamaica, the likelihood is that there will be enough office jobs so that any of the potential centers in and near the Core of the Region will be able to attract as many as it can easily accommodate over the next thirty years. This will depend, of course, on good accessibility and environment, adequate useable land, and public policies that aim at building a large center there.

Leadership

The initiative taken by those who have formed the Greater Jamaica Development Corporation, including

(continued on page 31)

Charles Pratt



King Park is large and beautiful, with many trees, cobbled walks, open areas and some nostalgia in its old bandstand.

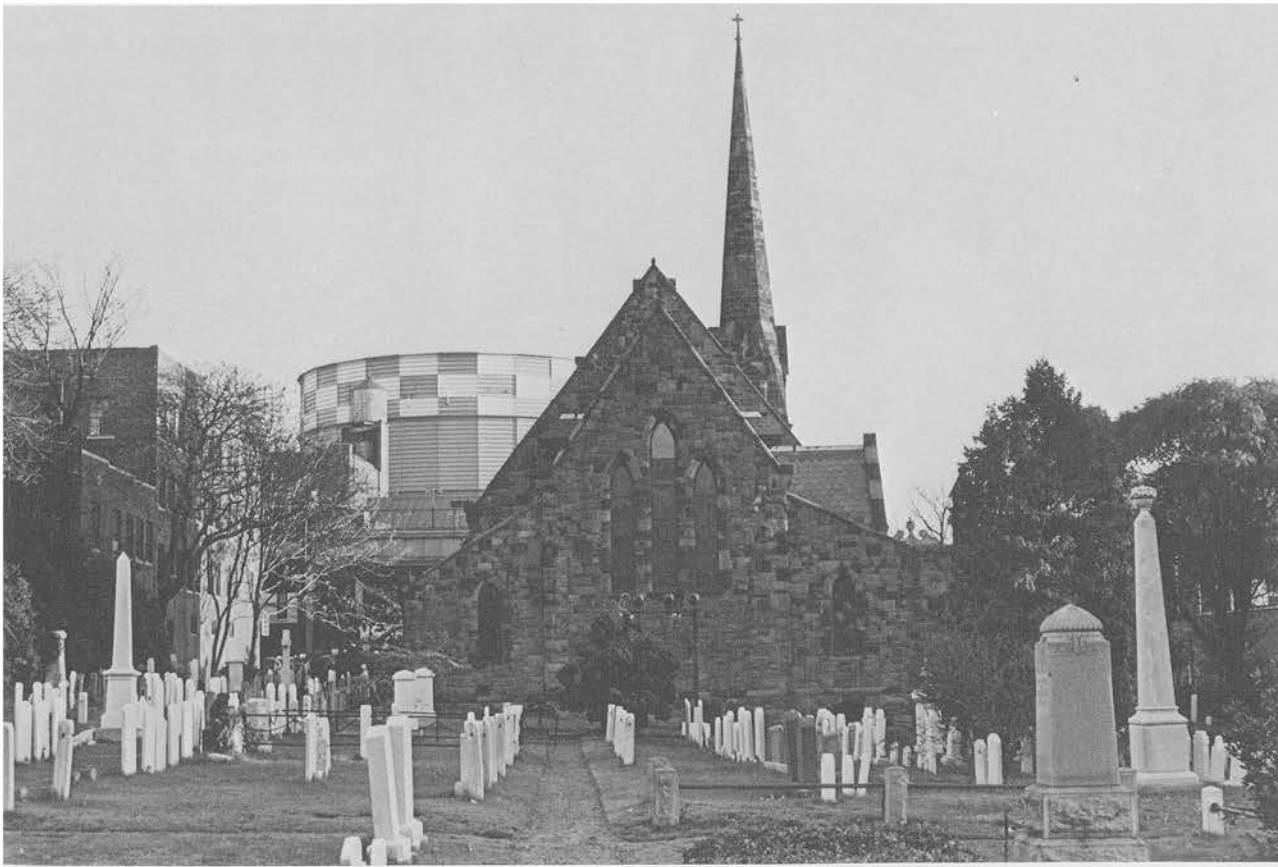
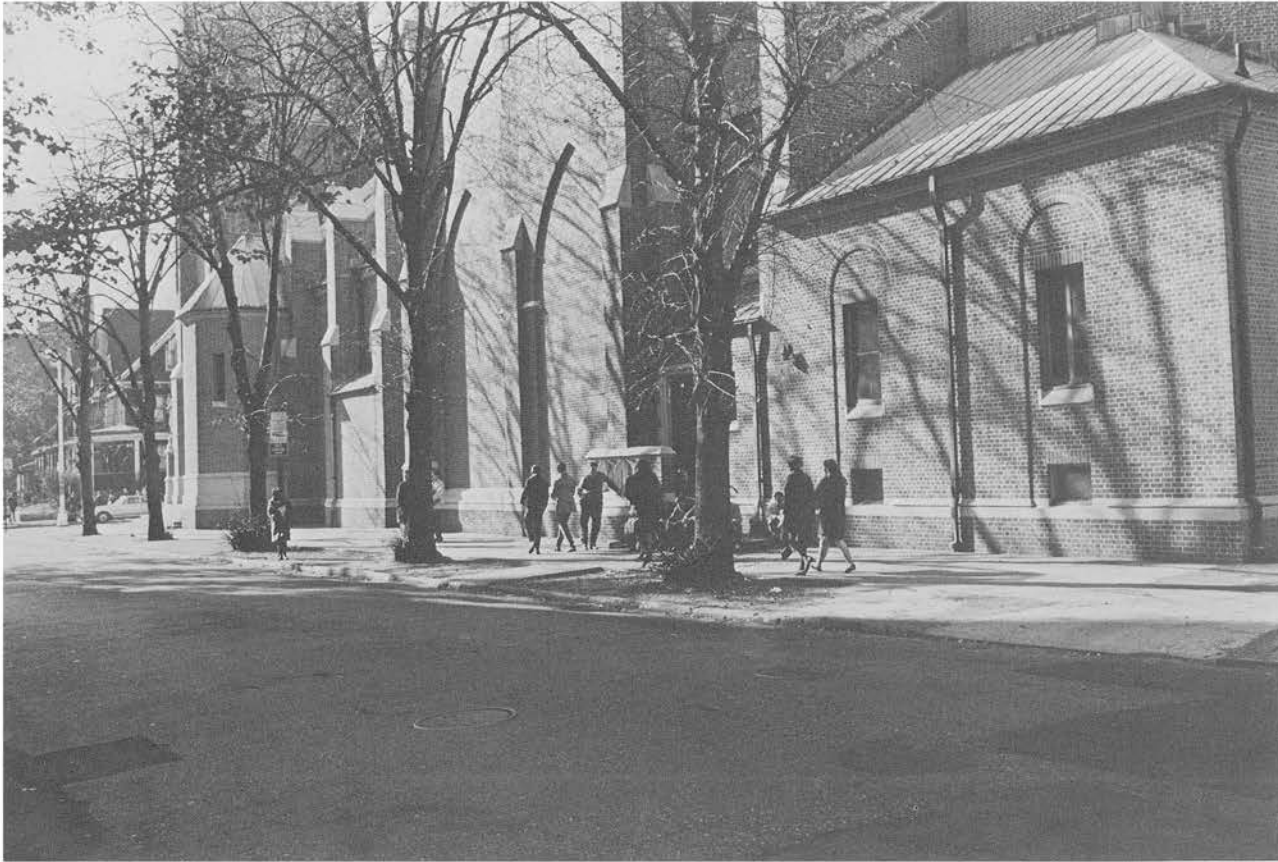
Charles Pratt



Charles Pratt

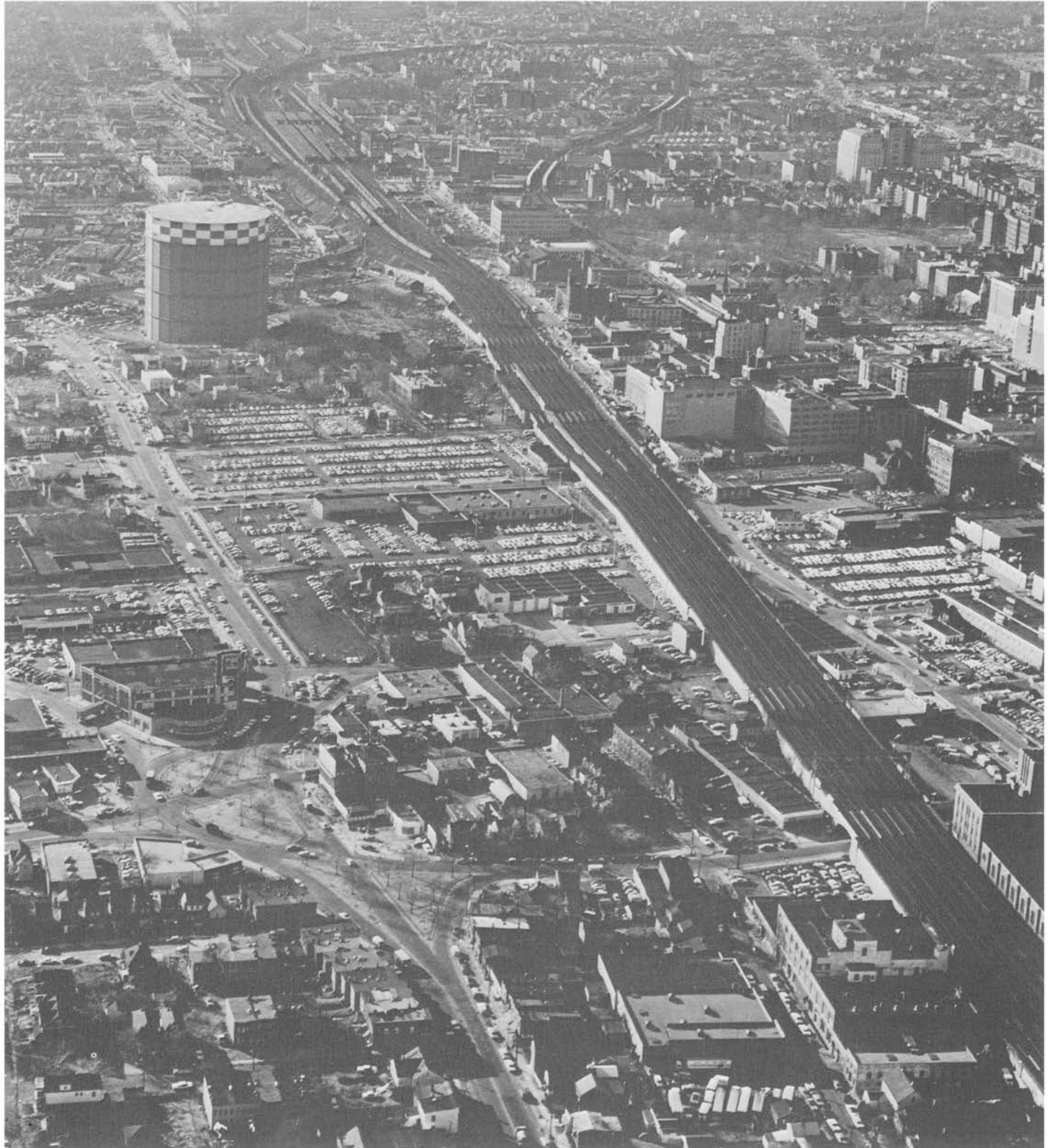


Old, well-kept houses and apartments built modestly along streets with large trees make parts of downtown Jamaica very pleasant.



Churches are among the institutions which are within walking distance of nearby apartments and department stores on Jamaica Avenue. Grace Church, with its delicate steeple and cemetery, left below, is a landmark.

Louis B. Schlivek



The Long Island Rail Road goes through the heart of the future Jamaica Center. To the north of this embanked structure is present downtown Jamaica (right), the fourth largest retail center in the Region. There are many acres of undeveloped, open land used primarily for parking and storage along both sides of the tracks and near the downtown. Constructing parking garages and relocating some industries and service facilities could make much of this land available for a college, a medical complex and new office buildings.

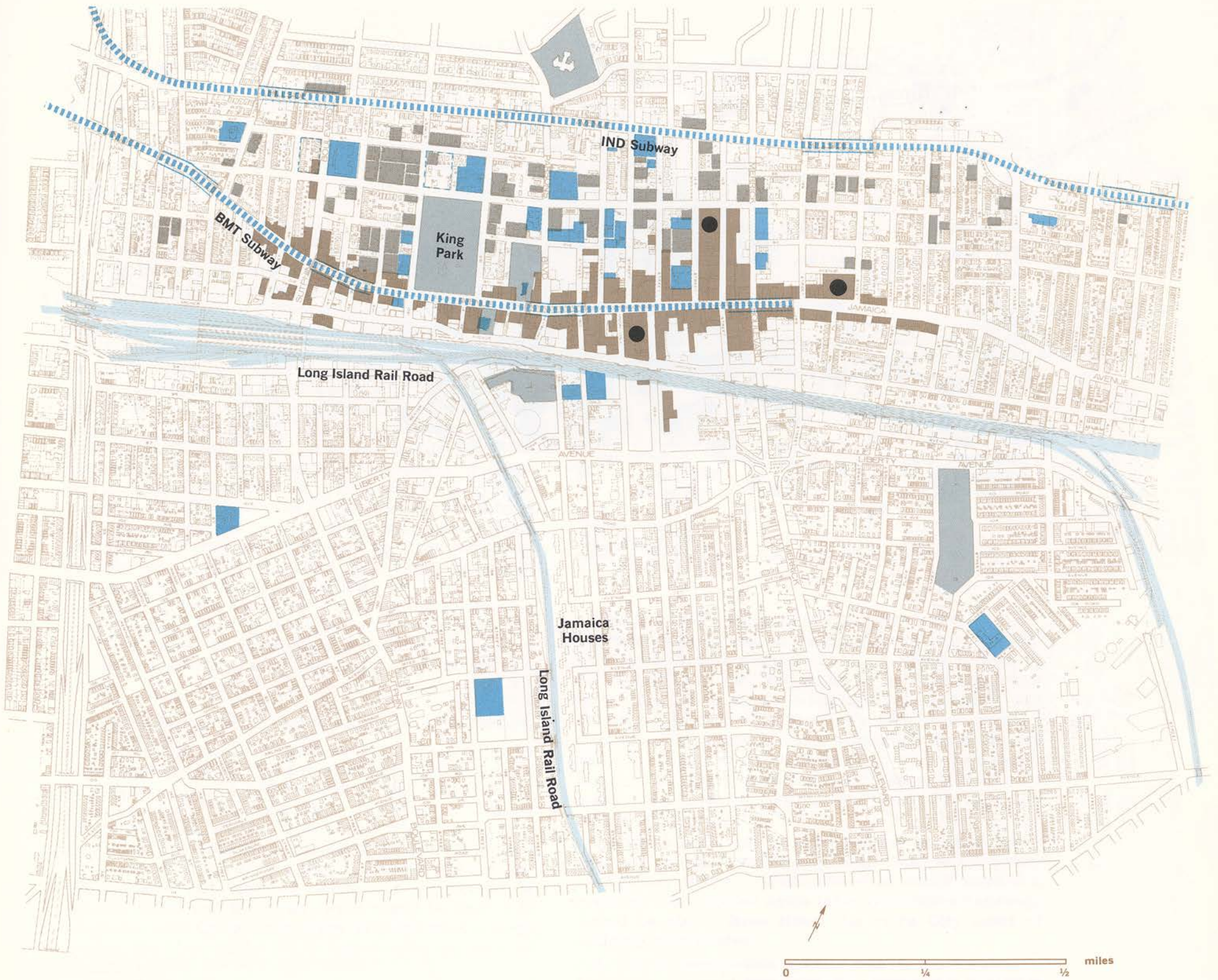


Much of the area just south of the Long Island Rail Road tracks is presently used for junk storage or parking. Because very few people live in this area, and because it is centrally located, the land is ideal for development.

Louis B. Schlivek



Jamaica has a variety of things to do that are located within walking distance of each other. King Park, center, is near the shopping district and is surrounded by many new apartments, upper left, by a hospital, a courthouse and private school.



Map 9

IMPORTANT URBAN ACTIVITIES

- | | |
|--|--|
| ■ Institutions
Governmental, Educational, Medical, Cultural | ■ Apartments |
| ■ Major Shopping
● Dept. Stores | ■ Open Spaces |



Map 10

DEVELOPABLE LAND
Non-Residential and Non-Retail Areas

- | | | | |
|---|--------------------------|---|--------------------------------------|
|  | Vacant Land |  | Open Land Areas
Low intensity use |
|  | Parking Lots and Garages | | |

individual civic leaders like its chairman, Queens College President Dr. Joseph P. McMurray, and organized groups like the Jamaica Chamber of Commerce; the able and enthusiastic support by community groups for the location of York College in Jamaica; and the strong backing of the **Long Island Press** for the center give evidence that the essential ingredient of local leadership is present.

Business acceptance

Queens leaders first tested the idea of a center with a preliminary feasibility study by consultant David L. Lutin. That report encouraged them to form the Greater Jamaica Development Corporation and to ask Regional Plan and Mr. Lutin to continue the research.

Among business people generally, however, the potential of a Jamaica Center is not obvious. The impending dramatic increase in office jobs in the metropolitan area is not fully realized, and the concept of building major new "downtowns" outside Manhattan is very new. Nevertheless, when these two points were explained briefly to top New York executives of forty-two major corporations, some immediate interest in locating in a new center in Jamaica was elicited from a dozen and support for the concept was elicited from another dozen who had no present need for additional office space in the Region. Four major office developers also showed interest (see Appendix 6).

Already, there is solid interest in locating in Jamaica by enterprises seeking about half-a-million square feet of office space—if transportation, City planning and Jamaica leadership decisions point toward such a center.

Specific benefits from a Jamaica Center

Queens will benefit considerably by grouping large commercial, educational, cultural and health activities so that more people will be able to reach them easily with a choice of transportation. The residential parts of the Borough will be spared the traffic and other nuisances generated by these facilities when they are scattered. Without such a center, many of these prospective jobs and services would not be located in Queens at all, and those that were would be harder to reach for most Queens residents. Without such a large center, there would be much less magnetism to hold population.

Some \$400 million in capital investment of public and quasi-public organizations is already budgeted or proposed for projects likely to be located in or directly related to Jamaica (see Table 4). Queens will greatly benefit if these projects are planned to make them work together—for example, if major activities are clustered and placed so that they can take advantage of and support the costly transportation improvements that will be made.

Table 4

PROPOSED, BUDGETED AND RECENT CAPITAL PROJECTS IN OR RELATED TO JAMAICA

Public	
• York College	\$ 52,000,000
• Hospital	60,000,000
• Family Court conversion	5,350,000*
• Hillcrest High School and Public School 86	13,350,000*
• Central Library	7,100,000**
• Social Services Center	2,200,000***
• Subway service to Southern Queens	100,000,000
• LIRR system improvements	13,000,000
• Removal of BMT Elevated, subway improvements in Jamaica Area	50,000,000
• LIRR service to JFK Airport	100,000,000
• Parking garage	2,100,000*
• Parking deck	922,000*
• Street pavings in South Jamaica	925,000*
• Widening of Parsons Boulevard	770,000*
• Repaving of Jamaica Avenue	1,650,000*
Total	\$409,367,000
Voluntary, Quasi-public	
• Mary Immaculate Hospital expansion	20,000,000
• Medical school	60,000,000
Total	80,000,000
Grand Total	\$489,367,000

*Already budgeted.

**Already completed.

***Rental space, ten-year lease.

Source: New York City capital budget, Regional Plan estimates or estimates by the agencies involved.

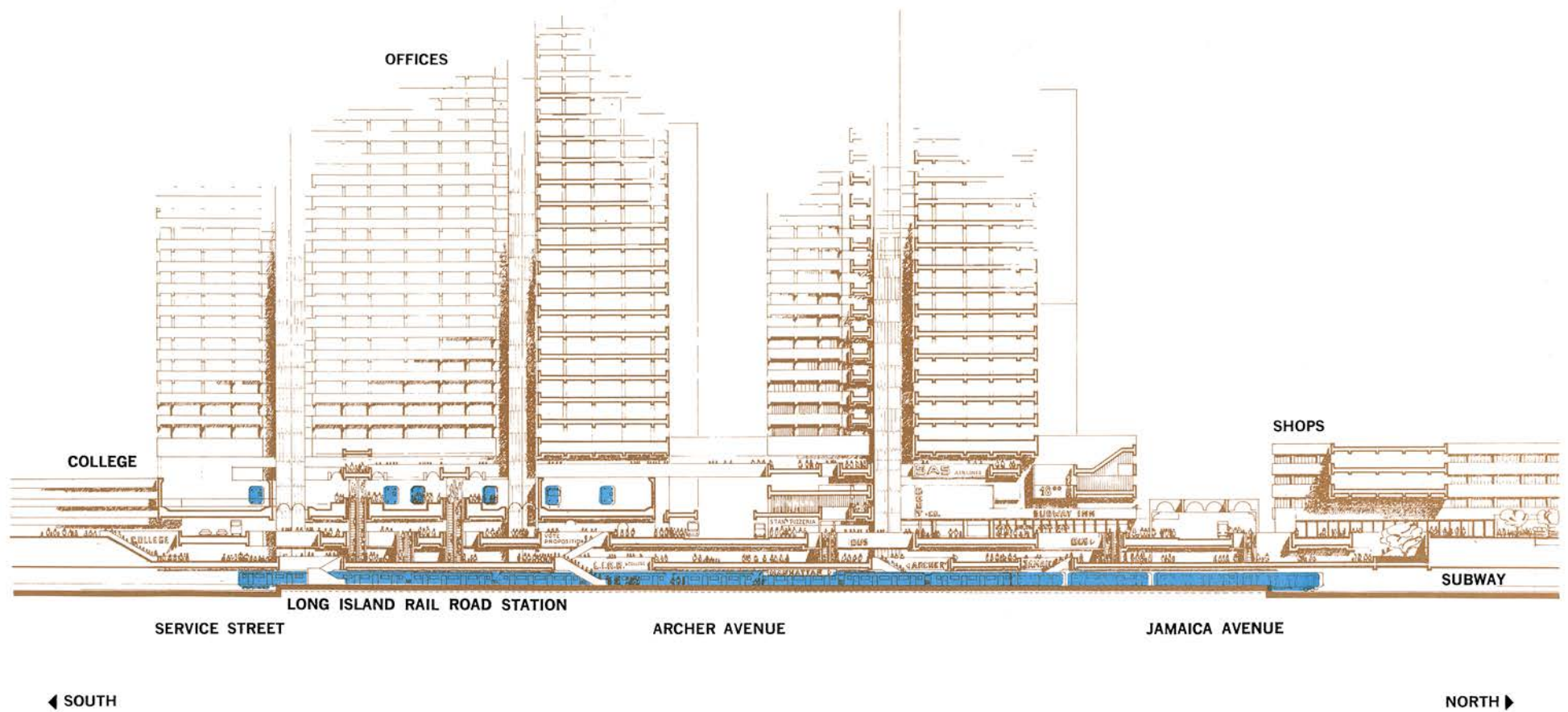
New York City will benefit in three ways:

1. More people will be working in the City. Middle- and upper-income people will be attracted to jobs in Jamaica Center; they will be more interested in living in the City than people working in the suburbs and will be more involved in the City's problems—an absolute essential to prevent the separation between city and suburb, rich and poor, Negro and white from growing into an unbridgeable chasm. There will also be many more jobs for Negroes and Puerto Ricans and for the poor generally.

2. Its tax base will be strengthened by office buildings and payrolls that otherwise probably would locate in Nassau, Bergen, Westchester or other suburban counties. Anticipated extra taxes from office buildings would be about three times the extra City costs of building this Center.

3. The transportation system will be more efficient; for example, excess transportation capacity is available for the increased reverse commuting (eastbound from the direction of Manhattan) that would take place.

The Region will benefit because efficient locations will be provided for office jobs, on which the Region's economy increasingly rests. It will also benefit by having the concept and feasibility of large sub-regional centers demonstrated so the pattern can be followed elsewhere.



JAMAICA CENTER

A slice, or section, through the heart of the proposed Jamaica Center shows how office buildings could be built directly over the proposed new subway station (lowest level), under Parsons Boulevard, and over a new Long Island Rail Road Station. New bus loading facilities at street level would be along side the railroad station. Shops

would be built on the lower levels of this complex and Jamaica Avenue would continue to be a retailing street.

The new rail, bus and subway station in this location would provide direct service to the commercial areas of Jamaica Center, and to the proposed new offices, college, hospital and medical school.

“It no longer makes sense to create isolated, detached college campuses in an age when the need is for schools to be fully immersed in the general life of the City.”

“The school must be a major part of, and a major contributor to the urban environment. This is why this administration favors strongly the Jamaica site for York College.”

*John V. Lindsay
Mayor, New York City*

3. PROPOSALS FOR JAMAICA CENTER

Components of the center

Jamaica is clearly an excellent location for 50,000 office jobs by 1985—5½ times as many as were there in 1965. By the year 2000, perhaps as many as 100,000 office jobs will be in Jamaica. That would require about 50,000 supporting jobs by the year 2000—in restaurants and stores and performing other services needed by office workers.

In addition to this new employment, the Regional Plan staff recommends that the following also be located in Jamaica:

- A new major college. (Regional Plan Association is now urging the location at Jamaica of York College, the new unit of the University of the City of New York.)
- A large hospital and related medical college. (The New York Medical College, soon to move from Manhattan, would appear to be appropriate.)
- A substantial increase in department store floor space.
- At least 10,000 more apartment units.
- A large hotel.
- A museum and other cultural facilities.
- A consolidation of civic and legal facilities.

Principles of a Jamaica plan

The following sections suggest a plan for Jamaica Center. Despite its detail, it is not a final plan. Its purpose is to show by example how planning for Jamaica can be approached and to state and apply some essential general principles for its physical organization and design.

1. Internal arrangement. Offices and other activities which attract or employ the largest numbers of people should be placed nearest to transit stations.

—New construction should be in Jamaica's major "weak" areas. Two of these areas with particular potential are the blighted, under-used parcels south of the Long Island Rail Road tracks and the section of Jamaica Avenue in the vicinity of Parsons Boulevard.

—"Strong" areas, such as the department store district, the institutional and civic area north of King

Park, and the various churches would thus be preserved or reinforced.

—Separated parts of the Center should be "bridged," i.e., linked together, by an activity that complements both. For example, the college could serve as a bridge or transition between a business district and South Jamaica. A large, partially open subway mezzanine could serve as a physical link between two sides of a busy avenue or of an embanked railroad.

2. Walking. Jamaica Center should be compact. The greatest range and number of its activities should be within a 5- or 10-minute walk of its heart. Walking is the most efficient way to cover short distances, and its economical use of space would enable facilities to be close together so distances can be short. For example, a given "lane" for movement can handle 7,000-15,000 persons walking, 4,000-9,000 persons in buses or 1,000-3,000 persons in cabs.

—Walking should be the normal means of intra-Center movement; the design of streets and spaces and the placement of structures must, therefore, give high priority to pedestrian needs. Among these needs are ample circulation space, shelter from bad weather, safety, attractive open spaces, clear directional signs and means of orientation, sitting areas, visible transitions leading from area to area, views that define or encompass distinct areas and make them comprehensible, variety and contrast—old and new, natural and man-made, active and inactive. Signs, sounds and lighting in public areas should be regulated to prevent chaos and cacophony.

—Within a ten-minute walk of a major office complex, there should be a park or large open space and at least 1 restaurant seat for every 10 office workers.

—Narrow sidewalks in Jamaica Center should be widened, particularly along Jamaica Avenue. Certain discontinuous streets should be used exclusively for pedestrians. If streets are barren or harsh, trees should be planted, and tended. If traffic lights are required in the Center's busy areas, they should be timed to pedestrian flows and not just to vehicle movements.

3. Vehicle circulation. Traffic should be separated according to type, purpose and speed. This requires

removing trucks from pedestrian areas. There should be special truck loading areas, ideally underground but perhaps behind the major shopping street as well.

—Cars should be discouraged from entering crowded areas. Some fringe parking should intercept autos coming to the Center, and parking facilities in the Center should be underground or incorporated in buildings. Bypass roads should carry bypass traffic around the Center.

4. Multi-level layout. Several levels are required for proper separation of traffic. But separation of traffic types is a means; the ends desired are continuity of pedestrian areas, easy pedestrian mobility and comprehensible pedestrian spaces.

—Multi-level designs can also be used to bridge areas that are physically separated at grade level by barriers that cannot be removed. The Long Island Rail Road is an obvious example of such a barrier in Jamaica. Roofs should be considered for their potential as pedestrian areas.

5. Main open spaces. Jamaica Center needs a variety of outside open spaces to perform a variety of important functions—spaces to join or separate, to intensify activity or diminish it, to encourage movement or to encourage resting; exposed spaces and sheltered spaces. These spaces are a significant part of the plan because together they—perhaps more than the buildings—can make Jamaica Center an understandable place to be in. By helping to orient, guide and fulfill specific needs of people, they can make the Center efficient and satisfying. By being distinctive and comfortable, these spaces can make a visit to the Center memorable.

—There should be at least three main and memorable open spaces in Jamaica Center.

King Park should remain the major natural space and restful area in Jamaica Center. New development on three sides of it should be consistent with King Park's quiet character. But along its southern boundary at Jamaica Avenue, offices and perhaps a hotel should be built.

Another of these important spaces should be at the transportation station, to act as a sort of lobby through which people enter the Center. It would be a very active space; its function of distributor requires that it have easy and sheltered walking arrangements to clearly visible outlets. It should be free of motor vehicles.

A third main space is Jamaica Avenue, which should be transformed into a street primarily for

pedestrians and relieved of its function of carrying traffic. This important space is discussed later.

6. Nature. Natural elements and parks should be preserved. An urban environment that is relentless, with unrelieved expanses of manufactured materials—concrete, steel, glass and asphalt—is not satisfying or pleasurable. If there are not enough parks, or if they are not well distributed, land should be cleared and more parks created. Seasonal change should be visible. Trees and parks contain the symbols of seasonal change.

7. Distinctive characteristics. Some existing areas and structures in Jamaica, familiar to persons who live, work or shop there and impressive to outsiders, should be preserved. The Court House on Sutphin Boulevard, King Park and some block fronts around it, and Grace Church are examples. Elements such as these, with special physical character, help to identify Jamaica. Saving these elements, finding new uses for them if necessary, and working them into the plan so that their distinction is not diminished will retain some of Jamaica's past and provide contrast and variety.

8. Local participation. Local residents and merchants should be encouraged to participate in the rebuilding.

9. Relocation. Residents who will be displaced are few, but they must not be left with inferior housing or housing at rents they cannot afford.

10. Lines of expansion. Jamaica Center must be designed to expand—generally in a linear fashion, paralleling the Long Island Rail Road tracks. In places, the air-rights of these tracks appear suitable for development. Determining the Center's ideal or "ultimate" size, shape or makeup is neither possible nor desirable. Adherence to the above principles and establishing lines of growth will help make internal growth and major expansion more coherent and predictable.

Some specific locations and arrangements of activities are suggested here to illustrate how the Center might be organized, and a sequence of development is suggested to demonstrate that pieces built separately can form a related whole. But the design plan is only illustrative. Other places might be appropriate for, say, the railroad station, the college or the medical school, and many designs might be suitable. Many other activities are possible. The principles listed above, however, are not merely illustrative; they are extremely important. Locations and designs that ignore them could well defeat the whole concept of Jamaica Center.

Locating key elements of Jamaica Center

Offices should be located and designed so that it is easy and quick for workers to walk from trains and buses to elevator lobbies. It should be possible for most of them to walk the entire route under cover if they wish to.

The prime locations for office buildings in Jamaica are the areas around future transportation stations. But office employees like to shop during their walks to and from work, and they need nearby places where they may eat, relax or stroll, and nearby stores where they may shop at noon and after working hours. Therefore, proximity of offices to Jamaica Avenue and to King Park is important. The area along Jamaica Avenue centering on Parsons Boulevard, between King Park and the Gertz store, fulfills these needs. This area is now relatively deteriorated (with some notable exceptions like Grace Church and the Jamaica Savings Bank) and rather weak economically. Building in the weak parts of this area will help to connect the two strong areas on either side—the retailing district around the three department stores to the east and the institutional (hospital, courthouse, school) and residential district to the northwest. It would also minimize “dead areas” caused by the loss of activity as construction proceeds. Jamaica Center must continue to operate while it is being redeveloped.

New office buildings must not result in the elimination or poor location of other, related enterprises. In Manhattan, office towers, with their economic superiority, are displacing small restaurants and shops which, paradoxically, are more needed after the offices are occupied. This process is also lamentable because it decreases street life and vitality. Office buildings could sterilize Jamaica Center. To avoid this, they should be carefully placed **behind existing or on top of new** retail and service enterprises on Jamaica Avenue.

The college. In New York City, enrollments in public and private higher education facilities are now about 235,000. By the year 2000, they will increase by 350,000 to nearly 600,000, a growth rate of 170 percent, compared to projected growth in the Region as a whole of about 260 percent. If we assume new institutions of 12,000 students each to take care of this increase, 6 to 9 new colleges will be needed within the City of New York.

Colleges increasingly interact with the community.

Students and faculty do research on live issues and often advise and lead community organizations. Colleges open their doors to non-matriculated students in adult programs. They draw lecturers from the community, and their students find jobs there. The college population supports cultural activities, from which the community benefits; the students and faculty benefit from a transportation system built mainly to serve trips to work in the same area. And office workers and university students and faculty share such facilities as a central library, book stores and restaurants. Many of both groups inhabit nearby apartments. In sum, the place for a city college is in a major center.

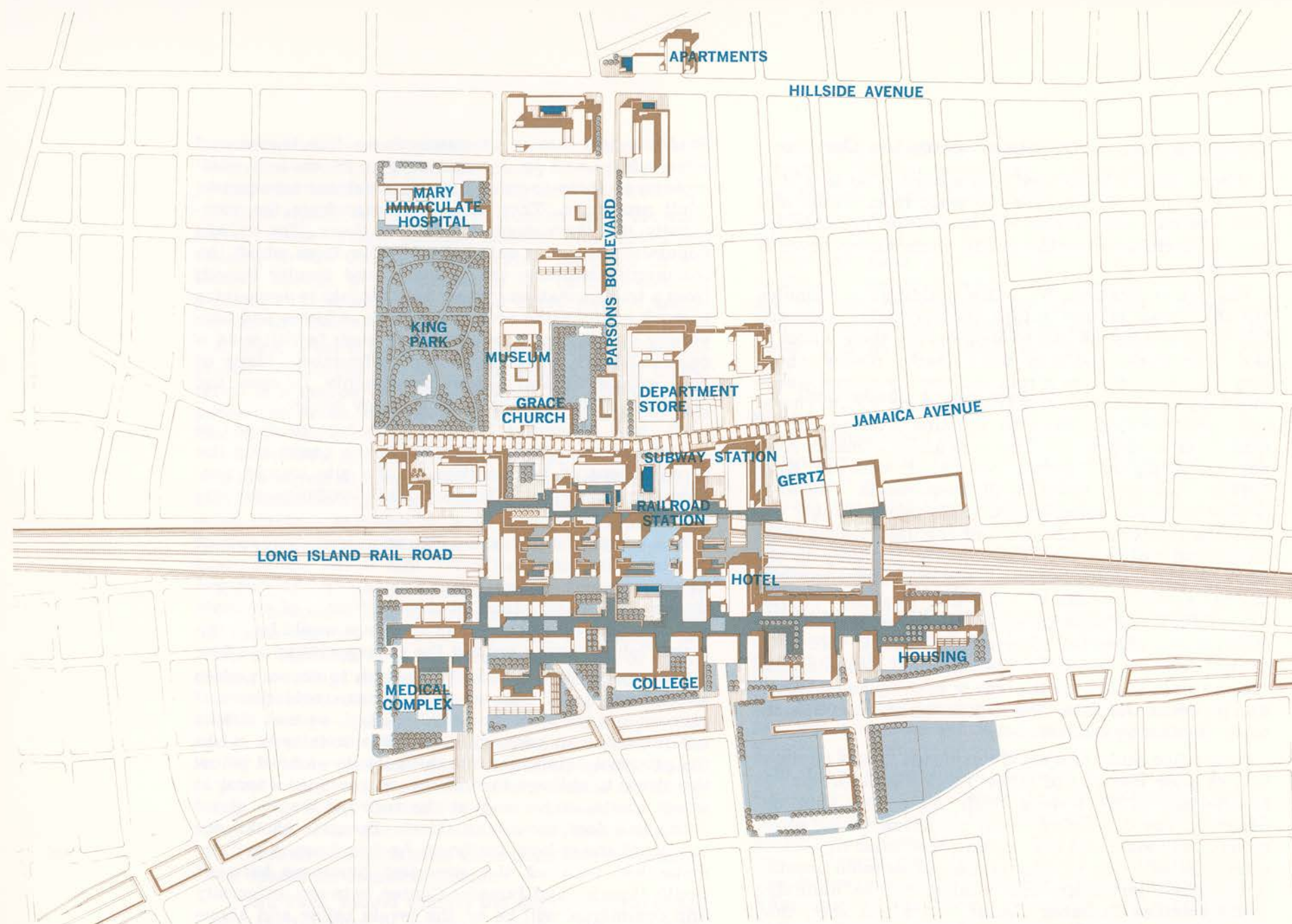
The new college at Jamaica should be designed to respond to its urban situation. Space needs and the arrangement of its facilities on the site should provide for functional efficiency and flexibility for expansion.

The union of town and campus is largely a design problem. In Jamaica Center, this union would occur at several new places opened up along the railroad tracks. The major place for the confluence of students and faculty with workers and shoppers would be in the main “lobby” space around the transportation station.

This space should be large enough to accommodate special events of interest to students, residents, employees and shoppers but small enough so that it does not seem barren when there is little activity in it. In the proposal, this space has three levels—a level below the street to enlarge the subway mezzanine, a level at street grade, and one over the railroad trains, about thirty-five feet above the street. Because of the obstacles of street-level traffic on Archer Avenue and the embanked railroad, the strongest junctures between South Jamaica and Jamaica Center, between university and commerce, will be on the levels below and above the street.

While proximity to a center is valuable, separation also is important— separation of town from campus, of quiet areas from noisy ones, of green spaces and facilities conducive to study from busy places. This is a complex but soluble design problem for planners, architects and landscape architects.

The college should be compact. The average campus density in the Core of the Region is appropriate for the college in Jamaica Center. New urban universities outside the New York area also are being built at this density or higher. The University of Illinois' new campus in downtown Chicago is 100 acres for an enroll-



JAMAICA CENTER

Based on Transportation Plan A

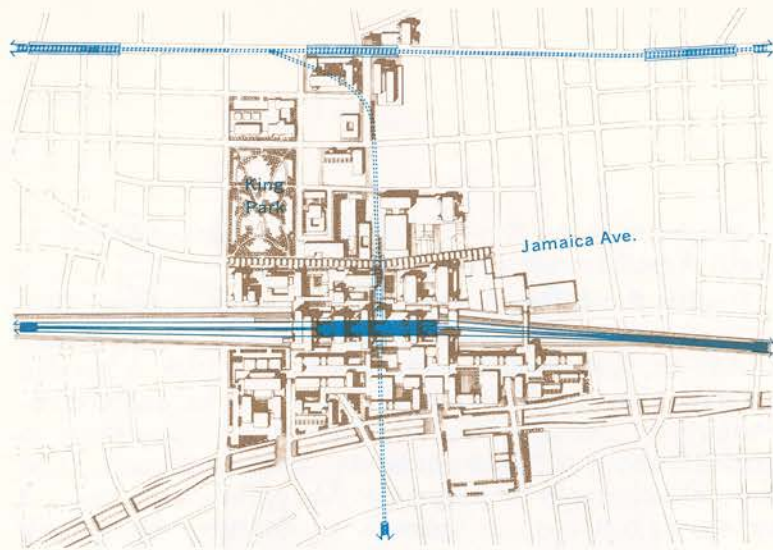
Most of the new buildings of Jamaica Center would be constructed over and around the proposed new transportation station which is centered on Parsons Boulevard and just off Jamaica Avenue. Offices would be built along both sides of Jamaica Avenue, either behind existing retail or on top of new shopping so that Jamaica Avenue remains a lively street of continuous shops. From King Park to Gertz department store, most automobile traffic would be removed from Jamaica Avenue. An overhead shelter for pedestrians is shown in this section of Jamaica Avenue. The largest office buildings would be built over the proposed new transportation station. A college and medical complex are the major uses proposed for the area south of the LIRR tracks. Offices and some apartments would be built around the intersection of Hillside Avenue and Parsons Boulevard. Additional institutions, including the expanded Mary Immaculate Hospital, would be located around King Park.

Most of the undesignated buildings on the drawing above are offices.

The subway station of the proposed new IND extension from Hillside Avenue is under the elevated railroad station, for direct passenger interchange between the two. The mezzanine of this station, below street level, would extend from Jamaica Avenue to a point south of the LIRR tracks. This mezzanine would help link areas that are presently separated; it would be large and generously opened to both sides of the tracks so that people could move freely to and from sides of the LIRR tracks.

Several levels of platforms are provided to allow pedestrians to walk over the tracks, also. The main level of the college is above the street to make this bridging easier and to accommodate parking below.

The different shades of blue represent different levels of pedestrianways, including parks.



TRANSIT. Under one Regional Plan proposal, a new subway tunnel would be built from Hillside Avenue to South Road, generally under Parsons Boulevard. A station would be built at Jamaica Avenue. One of the present IND services would be used for South Jamaica.

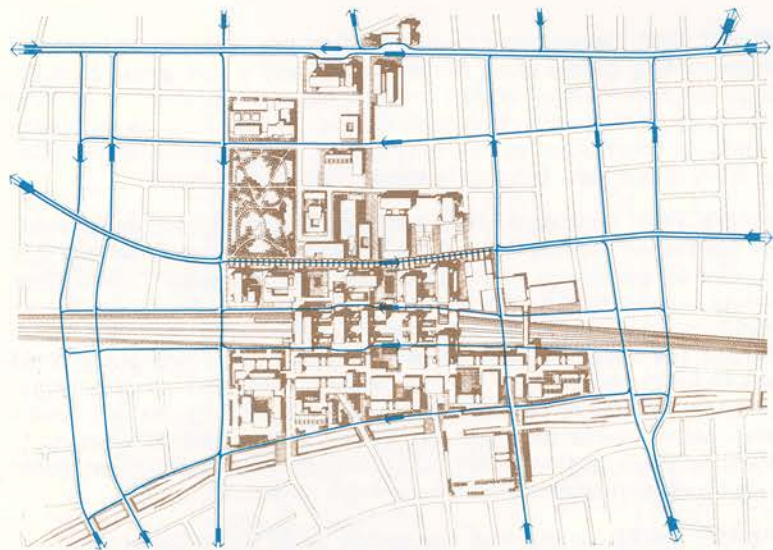
A new Long Island Rail Road station would be built at Parsons Boulevard, directly over the new subway station.

The BMT Elevated service would be removed from Jamaica Avenue and routed into the IND Hillside Avenue line where it would continue to the 179th Street terminal.



TRUCKS. Service trucks would use a minimum of streets in Jamaica Center. They would approach the Center primarily on Liberty and Jamaica Avenues, and on Sutphin and Merrick Boulevards. Their entries into the Center would be restricted to four routes—Archer Avenue and the new service street proposed along the railroad, 150th Street and New York Boulevard. Hillside Avenue or South Road would not be used for trucks serving Jamaica Center.

A tunnel to underground loading docks would be provided for the largest buildings suggested for the area around the transportation station. This service area could be rather easily provided by modifying and widening the Parsons Boulevard subway tunnel from 90th Avenue to the LIRR tracks.



BUSES. Jamaica Center would accommodate more buses on a grid of streets, including Jamaica Avenue, which would be primarily for pedestrians and buses. There would be a main bus station under the new railroad station, and special off-street loading lanes would be incorporated into new buildings at the Parsons Boulevard-Hillside Avenue intersection.

TRANSPORTATION COMPATABILITY. These four maps show the relationship of all forms of transportation in Jamaica Center, both to each other and to the proposed Center development. Transportation Plan A was used as the basis for these illustrations.



AUTOMOBILES. Private cars would circulate around Jamaica Center and enter it at several streets leading directly to parking garages.

The main streets for moving cars would be Hillside and Liberty Avenues on the north and south, respectively; pairs of streets running north and south would be coupled; Sutphin Boulevard and Waltham-164th Street on the west; Merrick Boulevard and 168th Street on the east. Most of the automobile streets within the Center would be for one-way traffic.

Jamaica Avenue, from 150th Street to New York Boulevard, would not be used by cars.

Most parking would be provided along Archer Avenue and the new service street paralleling the railroad tracks. This would allow persons to walk easily from their parked cars to most parts of the Center. Some parking spaces could be shared by the college and the commercial activities.

ment of 20,000—a density of 200 students per acre. Scarborough College on an open land site in Toronto, Canada, is virtually a single (and very exciting) building comprised of a variety of spaces to accommodate 5,000 students at a net density of about 1,000 students per acre. Forest Park Community College in St. Louis will have 7,000 students at a net density of about 1,800 students per acre (see Table 5).

Table 5

LAND AREAS OF SELECTED HIGHER EDUCATION INSTITUTIONS

School	Total Enrollment ^a	Site Area, Acres	Density: Students/Acre
Manhattan			
New York University	27,200	22.35	1,217
City College	20,300	34.5	588
Columbia University and Teachers College ^b	23,597	42.1	560
Brooklyn			
Brooklyn College	29,600	42.0	705
Pratt Institute	3,285	18.5	178
Bronx			
New York University	4,420	42.0	105
Queens			
Queens College	17,800	80.0	223
St. Johns University	9,050	100.0	91
Hoboken, New Jersey			
Stevens Institute	2,280	43.0	53

^aPart-time, full-time and post-graduate, 1964.

^bIncludes three locations: Main campus, Medical Center, School of Social Work.

Compact new university plants like those in Chicago and St. Louis can be built in urban situations like Jamaica, where most students, faculty and staff are not housed on campus and where availability of public transit minimizes the needed land for automobile parking. The requirement for short walking distances between classrooms or between related activities is an important determinant of university layout.

York College, a new unit of the City University, will be located in the Borough of Queens. It is a four-year, liberal arts college. By 1972, its enrollment will be 5,000 and its staff 1,000. About 80 percent of the students will commute. Eventually, York plans to have 12,000 students and over 2,000 employees, as many students and more employees than Rutgers in New Brunswick has today. Regional Plan recommends that York College locate in the Jamaica Center. An exciting preliminary design for a campus there has been worked out by Hoberman and Wasserman, architectural and planning

consultants to the New York City Housing and Development Administration (see Appendix 2).

Health facilities. A new hospital with related outpatient services, perhaps linked to a medical school which in turn would have links with the proposed college, also would be appropriate and valuable components of Jamaica Center. The City is planning to provide about 600 more hospital beds in Queens, and several voluntary or proprietary hospitals may expand by 400 to 500 beds in Queens. In addition, New York Medical College is considering a Queens or Westchester County location when it moves soon from Manhattan. This college has a long record of good and broad service to urban residents.

The two existing general care hospitals in Jamaica, Mary Immaculate and Jamaica, are planning to expand. Together, they now have about 600 beds. Mary Im-

PHASES OF DEVELOPMENT. To demonstrate how Jamaica Center can develop smoothly, each phase building on the previous one, the following maps illustrate the transition that might take place if Transportation Plan A were adopted.

PHASE ONE. Development during the first two years would include a large parking garage along Archer Avenue and a core group of buildings for York College located around New York Boulevard. At least two large office buildings on Jamaica Avenue near Parsons Boulevard would be constructed in this early stage and the proposed extension of Mary Immaculate Hospital is shown north of King Park.

PHASE TWO. Additional office buildings and some new shops would be built along Jamaica Avenue, which will have been transformed into a covered pedestrian way within three to five years. York College would expand to the east and west; a hospital and medical school facilities would be constructed south of the railroad along 150th Street. The subway tunnel between Hillside Avenue and South Road would be completed and the new station and plaza constructed at Jamaica Avenue. An apartment building and office tower with shops and loading docks for buses are shown at the northwest corner of Parsons Boulevard—the block in which subway construction would require demolition of many of the present structures.

PHASE THREE. In the next five to ten years, York College and the medical school would expand further; more offices and a department store would be built along Jamaica Avenue. The new railroad station with a bus terminal below it and many large office towers above it would be built at Parsons Boulevard, directly over the subway station for easy passenger connections.

PHASE FOUR. More apartments would be built near the subway station on Hillside Avenue and along Parsons Boulevard. A museum would be located on the eastern side of King Park. A depressed highway "leg" from the Van Wyck Expressway to Merrick Boulevard might be built along Liberty Avenue. York College could expand over portions of this highway.



PHASE ONE



PHASE TWO



PHASE THREE



PHASE FOUR

maculate Hospital also is planning to build a new Medical Research Center adjacent to its present site along the northern edge of King Park.

Because of its superior transportation, its centrality and particularly because it is accessible to Southeast Queens, which is seriously deficient in medical facilities, Jamaica Center is the best location for most of the additional hospital beds needed in Queens. It is therefore a good location for a medical school. When a college is located in Jamaica Center, the medical school would find this a superior location (see Appendices 3 and 4).

Other institutions. The location of new and expanded court facilities in Queens is under consideration at present. Consolidation of some of these facilities near the present courthouse in Jamaica, where law offices and other court-related services already have congregated, seems advisable. Like a traditional county seat, Jamaica is near the center of the Borough and is the only place readily accessible from every part of the Borough by car and public transportation.

The central library of the Borough already is in Jamaica.

Finally, Queens should have a major museum, which belongs in the institutional area of Jamaica Center, near or on King Park.

Major shopping. Since Jamaica Avenue is already well-known as the main shopping street, it is reasonable to reinforce that clear and familiar situation. Most of the existing shops should be encouraged to remain; most of the new retailing also should be located there. Seizing the advantages of a linear shopping street can overcome its disadvantages. Pedestrians could walk safely and in pleasant, comfortable surroundings along the fronts of stores while the stores are served by trucks and parking from behind.

Jamaica Avenue should thus continue to be the most important street in the Center, but it must be completely transformed. Jamaica Avenue should become not only a street but a main space in the Center. To transform it, the elimination of the noise, dirt and unsightliness of the BMT Elevated is necessary, and the removal of vehicles which can be accommodated elsewhere or which are only passing through is a requirement. Archer Avenue, already a service-type street, should be used primarily by trucks and buses. Cars should circulate around Jamaica Avenue on 89th Avenue and on a new street adjacent and parallel to the Long Island Rail Road tracks.

The shopping street, or pedestrianway, should be covered to allow people to shop casually and pleasantly at all times of the year and during inclement weather. It would also shelter commuters as they walk from the rail-subway station to the door of the office buildings in which they work. People are willing to walk farther to shop or work if the environment is comfortable (see Table 6). In the winter, there should be places along the pedestrianway where people could warm themselves; air conditioning could be provided at places for summer use. Certain sections of the street's overhead cover could be eliminated to let in air; trees could be planted in these places. Portions of the rest could be covered with glass for a galleria-like area in which sky light enters the street. There could be places for resting, waiting, dining and refreshment.

Table 6
DISTANCES PEOPLE WILL WALK*

	Minutes	Feet
In a highly attractive, completely weather-protected and artificially climatized environment	20	5,000
In a highly attractive environment in which sidewalks are protected from sun and rain	10	2,500
In an attractive but not weather-protected area during periods of inclement weather	5	1,250
In an unattractive environment (parking lot, garage, traffic-congested streets)	2	600

*This tabulation refers to the lazy walker and to the one-purpose trip without interruption. If there are interruptions like resting on benches, in sidewalk cafes, shopping or taking meals, additional walking time will be acceptable.
Source: Victor Gruen, *The Heart of Our Cities* (New York: Simon and Schuster, 1964).

Ideally, such a structure would be in the street right-of-way, perhaps publicly or cooperatively provided and maintained. It would be so designed that major private stores adjacent to it could easily connect overhead canopies to it or perhaps even construct store extensions in it.

On Jamaica Avenue, a structure which seems suited to this purpose exists—the skeleton of the Elevated subway. It is neither an ideal nor popular structure, and most of it should be completely removed. But it might be made extremely useful if, when trains are removed, a segment of it is retained and significantly modified and embellished as a kind of galleria.

The noise, the shutting off of sunlight from the street, the raw clutter of hanging wires and signs, and the dingy undersides account for the negative impressions of many people toward the Elevated. But if a short section were retained for use as the structure of a new pedestrian shelter, all the familiar defects would not be perceptible and the El structure would be serving a

practical and novel purpose. The new shelter plus the reduction of heavy, non-shopping traffic could increase convenience and pleasure in shopping along Jamaica Avenue.

Housing. The number of households with one and two persons is projected by Regional Plan to more than double between 1965 and the year 2000 (**The Region's Growth**). Even within the same age group, trends point to an increase in the percentage of one- and two-person households.

If present preferences of these households continue, there will be a demand for about a million new apartments in the Region, particularly for apartments close to centers of activity where childless households usually prefer to live—and most particularly for apartments within easy reach of Manhattan. Jamaica Center, therefore, with its own activities and twelve-minute railroad service to Manhattan, should attract a great deal of this high-rise residential development.

Hillside Avenue has been developing steadily with apartment towers. Several factors suggest that this private construction will continue. First, the area is appropriately zoned and has many conveniences and pleasant environmental qualities. Second, subway crowding will soon be relieved under programs already proposed by the Metropolitan Transportation Authority and financed by the 1967 New York State transportation bond issue. Third, the great increase in jobs anticipated for Jamaica Center will attract many residents who prefer to walk to work.

There is sufficient land directly on Hillside Avenue between Sutphin Boulevard and 179th Street to accommodate about 6,000 more apartment units at present zoning. This should be encouraged.

Although zoned density appears proper along Hillside Avenue, parking facilities in the new buildings could be inadequate. Zoning should require sufficient off-street parking, or local streets will become seriously congested.

In South Jamaica, although public services and amenities should be significantly improved, the basic housing stock is relatively sound and requires only superficial improvement. Rehabilitation is generally feasible on the whole; programs of code enforcement should be supplemented with government technical and financial aid. Because there are many potential building sites on now vacant land, new housing can be provided for those relatively few families living in structures that cannot be suitably rehabilitated.

New housing should be carefully designed with sympathetic regard for South Jamaica's present character. Small-scale garden apartments seem most appropriate for much of the area, but eventually some higher-density housing might be suitable along New York Boulevard. This is potentially the community's local main street, where local services such as grocery stores (as contrasted with the more regional services of Jamaica Center) might be developed. Also, some areas along the future transit line might be appropriate for apartments.

Total land requirements

Table 7 shows the land needed for the added office space and institutions anticipated.

Table 7

LAND REQUIREMENTS FOR JAMAICA CENTER

		Summary	
	1. Offices		20 acres
	2. College		60 acres
	3. Medical school and hospital		<u>30 acres</u>
	Total		110 acres
1. Offices, 50,000 employees			
a. At 150 square feet per employee = 7,500,000 square feet. Assumed Floor Area Ratio of 10			= 17.2 acres
b. Open space for pedestrian circulation— 25,000 pedestrians at peak-hour, 5 square feet per person			= <u>2.8</u> acres
	Total		20.0 acres
2. College for 12,000 students, 2,000 faculty and staff			
a. Academic facilities, total 3,500,000 square feet at average Floor Area Ratio of 5 and 40 percent site coverage			= 40 acres
b. Parking structures for 1,200 cars			= 3 acres
c. Playing fields, 50 square feet per student			= 12 acres
d. Reserve land for expansion			= <u>5</u> acres
	Total		60 acres
3. Medical school and hospital			
a. Academic facilities, administration and housing = 1,200,000 square feet at Floor Area Ratio of 4.8 and 60 percent site coverage			= 9.5 acres
b. Hospitals 600 general-care beds, plus a special- care center = 850,000 square feet at Floor Area Ratio of 4.8 and 60 percent site coverage			= 6.5 acres
c. Parking structures for 1,800 cars			= 4.0 acres
d. Reserve land for expansion			= <u>10.0</u> acres
	Total		30.0 acres



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to find the most efficient plan
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which are efficient.

Jamaica Avenue is the main shopping street. But it is not a pleasant, safe or attractive place to walk. Traffic should be eliminated or significantly reduced on the main section of Jamaica Avenue. Most of the Elevated should be removed and a better transit line substituted; this action is being given serious consideration by the Metropolitan Transportation Authority.

◀ The noise, the clutter and the blocking of sunlight from the street make the Elevated objectionable. But if after the trains were removed, a short section of the structure were redesigned for use as a kind of galleria for pedestrians, the EI would be used in a practical and novel way.



Transportation

Importance of railroad and subway stations. Perhaps a third of the workers and students in Jamaica Center will arrive by subway and another small but growing segment probably will travel by Long Island Rail Road. (Railroad patronage probably will grow because suburban development will be expanding rapidly in the Nassau-Suffolk corridor, and rail speeds will soon increase while rush-hour automobile travel will gradually slow as traffic intensifies.)

Therefore, railroad and subway stations will be important magnets in Jamaica Center, drawing development toward them. Grand Central Terminal demonstrates the attraction of a railroad station for offices, even though less than 10 percent of Manhattan central business district employees arrive there by train.

Furthermore, efficient circulation within Jamaica Center would be best achieved by direct access from subway and railroad stations to office buildings.

For these reasons, station locations are of extreme importance in organizing the Center.

The railroad and subway system that serves Jamaica is focused on the Manhattan central business district, the only center in the Region with enough people arriving each day to justify a rail system for itself. However, a number of smaller centers, including Jamaica, can be well served by that rail system with relatively minor adjustments in it.

The Long Island Rail Road and two subway lines already stop in Jamaica. With expected improvements, rail service to Jamaica will be excellent, but its contribution to a dynamic center there will depend on the specific station locations.

The present location of the Long Island Rail Road station is more than 3,000 feet away from the hub of the present and potential center at Jamaica. This is not a reasonable walking distance. Newark demonstrates this: Penn Station (Newark) is about 3,000 feet from the business hub at Military Park, and few people walk between them. For a center to realize its full potential, the rail interchange point and the office-retail development have to be in one place. This means either building a new LIRR station to serve Jamaica Center or developing portions of the new office center around the present station. In the latter case, transit service must be provided between the station and the present retail hub.

Of course, the Center could work with inconvenient rail locations, but it may never get the chance. The idea of major office subcenters is new. Many people

remain skeptical that these subcenters can attract offices from either of the two present choices for office space, Manhattan and the auto-served suburbs. Manhattan, on the other hand, can attract offices, efficient or not, just because it is already the most successful office center in the country.¹ Scattered sites in the suburbs are the next choice because they are the only alternative to Manhattan as long as there are no well-planned subcenters with convenient transportation, parking and a reasonable standard of appearance and maintenance. To be accepted as an alternative, subcenters will need unusually good design, and good design requires railroad and subway stations in the right places.

Metropolitan Transportation Authority proposals. New York State's Metropolitan Transportation Authority (MTA) released its "program for action" on February 28, 1968. It supports the concept of Jamaica Center: ". . . Improvements are needed for better access to Jamaica, which is expected to grow in office, retail and educational activities. . . . Improvements should be coordinated with redevelopment plans for the area."

In addition, MTA proposes to achieve four key transit objectives for Jamaica Center:

1. Elimination of the eastern end of the BMT Jamaica Avenue Elevated line and replacement of its function—local distribution of passengers in Brooklyn and Queens—by a superior facility.

The blighting effect of this line on Jamaica's main commercial district inhibits downtown redevelopment. The MTA program includes the elimination of the Elevated from Jamaica Center but lists it in the second phase of projects, to begin in about ten years. It should be in the first phase for immediate action.

2. New rapid transit to Manhattan from presently unserved areas of southeastern Queens via Jamaica Center.

Areas of Queens beyond the reach of subway service are frequently no more convenient to subways and to Manhattan than parts of Nassau County. Transit extensions into these areas are imperative. Insofar as possible, these extensions should be made to serve not just Manhattan-bound trips but trips to Jamaica Center as well. The MTA program would serve South Jamaica in the first phase and Hollis in the second.


¹Nevertheless, Regional Plan will propose improvements in Manhattan's efficiency and amenity in a forthcoming report, *Urban Design: Manhattan*.



AREAS OF OUTER QUEENS NOT SERVED BY RAPID TRANSIT

Queens houses a quarter of New York City's population but has only 16 percent of the City's rapid transit mileage. On a per capita basis, Queens has the least transit mileage of any borough and the worst congestion on both rail and road gateways to Manhattan. Since 1940, the population of the borough increased by 650,000, but transit service has not been substantially increased. More than 60 percent of its area is beyond walking distance of subway stations. As a result, 40 percent of Queens residents who use the subway have to reach it by bus, and 7 percent reach the subway by auto. This is the highest proportion of subway riders needing an additional mode of transportation in any borough. As a result, travel times from outer areas of Queens are excessive.

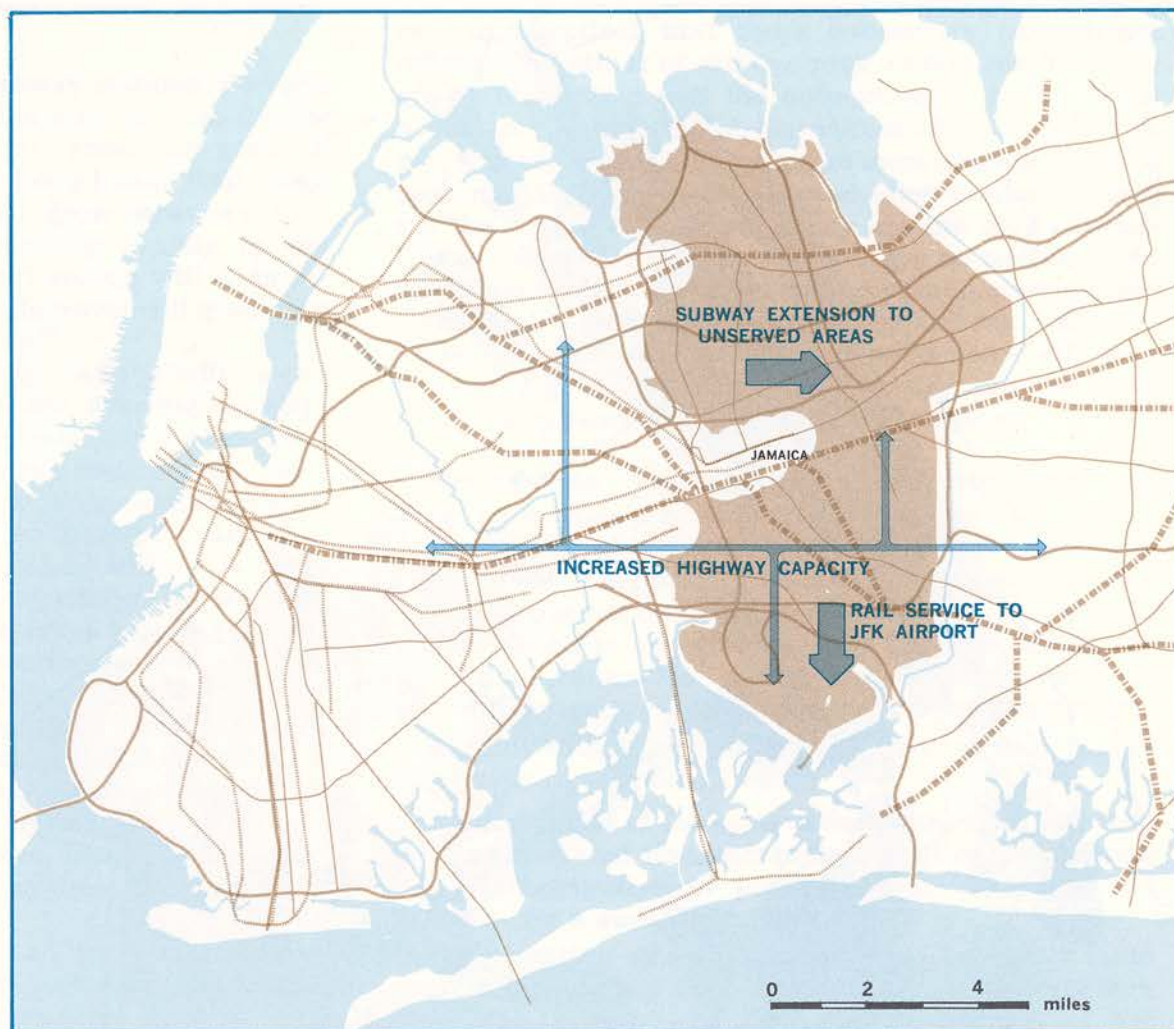
 Area within a 10 minute walk of a subway station

 Unserved outer Queens

Map 11

TRANSPORTATION NEEDS IN OUTER QUEENS

	Existing
HIGHWAYS	—
RAILROADS	— — — —
SUBWAYS	— — — — —



Map 12

TRANSPORTATION NEEDS

Outer Queens needs increased circumferential highway capacity—around the Manhattan central business district, not directly toward it. Unfinished expressways, such as the Nassau and the Clearview, should be completed. New subway lines to northeastern and southeastern Queens also are required. The transit extensions should serve not just Manhattan-bound trips but also trips to sub-centers in Queens, such as Jamaica.

OFFICIAL TRANSPORTATION PROPOSALS

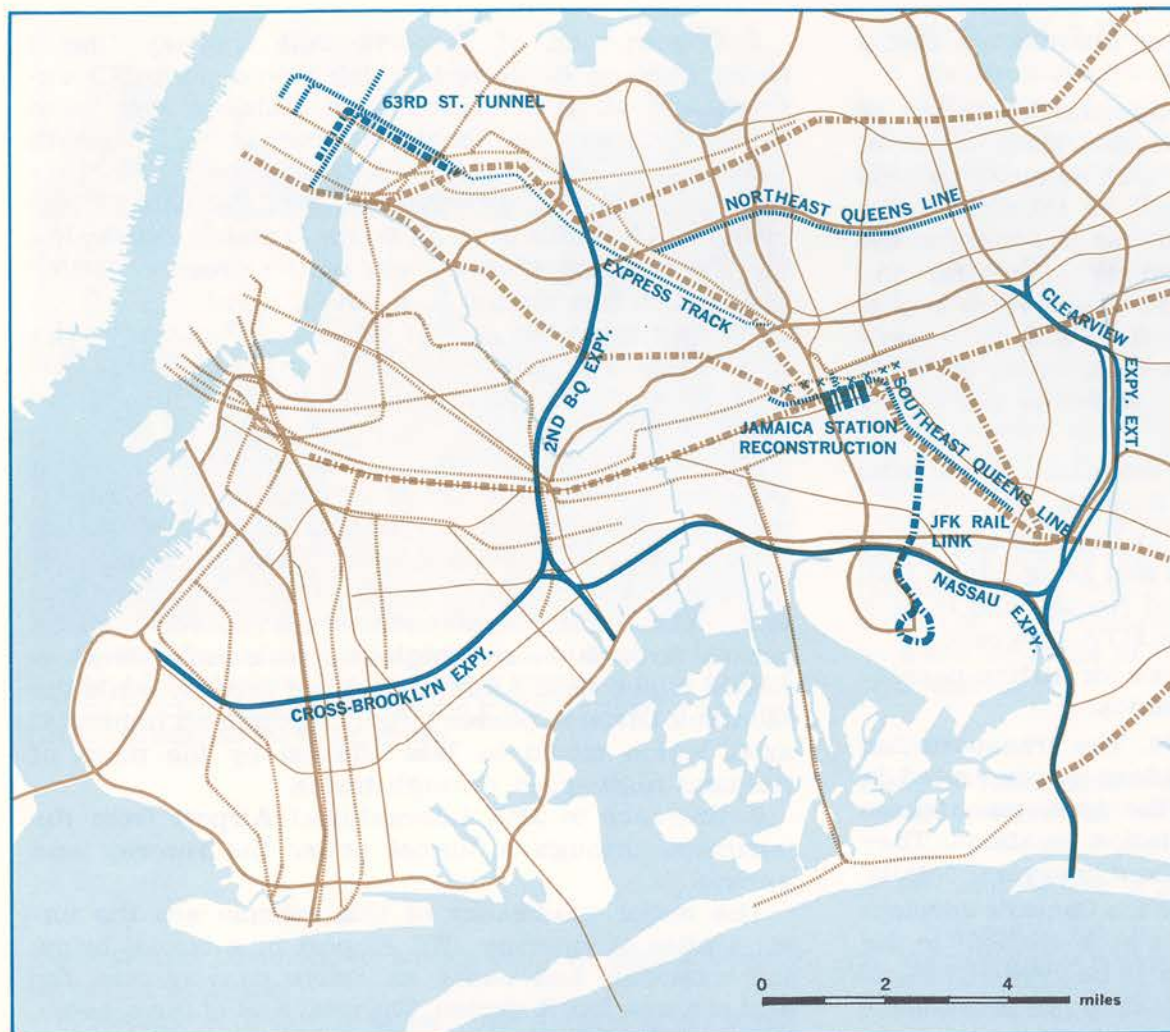
HIGHWAYS:

CROSS-BROOKLYN EXPRESSWAY from the Narrows Bridge along the Bay Ridge Division of the Long Island Rail Road to East New York, thence along Flatlands Avenue to the Conduit Boulevard interchange. Purpose: to provide service to a poorly accessible part of Brooklyn, and to complete the southern expressway bypass around the City's core.

NASSAU EXPRESSWAY from Conduit Boulevard, skirting JFK Airport, to Far Rockaway and Atlantic Beach. Purpose: to relieve the overload on the Southern Parkway and provide access to southern Nassau County and oceanfront beaches.

CLEARVIEW EXPRESSWAY EXTENSION from its present stub end along Hempstead Avenue to the Belt Parkway, a 4-mile section of which would be converted to a dual-dual expressway by eliminating landscaping, thence to an interchange with the Nassau Expressway north of JFK Airport. Purpose: to increase north-south circumferential capacity around Queens.

A SECOND BROOKLYN-QUEENS EXPRESSWAY from the Cross-Brooklyn Expressway in East New York along the LIRR Bay Ridge Division to the Long Island Expressway and Grand Central Parkway. Purpose: to relieve the overload on the existing Brooklyn-Queens Expressway and to facilitate circulation through poorly accessible parts of Brooklyn and Queens.



Map 13

OFFICIAL TRANSPORTATION PROPOSALS

	Existing	Proposed
HIGHWAYS		
RAILROADS		
SUBWAYS		

RAILROADS:

63RD STREET TUNNEL from Sunnyside Yards to a new East Side Terminal at 3rd Avenue and 48th Street. Purpose: to provide direct rail access to the East Side of Manhattan for Long Island passengers and to increase rail capacity to the Central Business District.

RAIL LINK TO JFK AIRPORT from the Atlantic Branch of the Long Island Rail Road to the 150th Street access road to the terminal area of JFK. Purpose: to speed ground access to the airport and expand ground access capacity.

RECONSTRUCTION OF THE JAMAICA LIRR STATION. Purpose: to expedite train movements through the station and reduce transfers.

SUBWAYS:

63RD STREET TUNNEL under the East River from the 7th, 6th and

2nd Avenue subway lines to the Queens Boulevard IND and Sunnyside Yards. Purpose: to relieve overcrowding on existing subway tunnels from Queens to Manhattan.

EXPRESS BYPASS TRACK from Forest Hills to the 63rd and 53rd Street tunnels. Purpose: to relieve rush-hour overcrowding on the Queens Boulevard line and provide faster service to outer Queens.

NORTHEAST QUEENS LINE from Queens Boulevard along the Long Island Expressway. Purpose: to provide access to a relatively high-density, poorly-served part of Queens.

SOUTHEAST QUEENS LINE from an existing stub-end under Van Wyck Expressway, along Archer Avenue and the Atlantic Division LIRR tracks to Springfield, interconnecting with a relocated Jamaica BMT under Archer Avenue. Purpose: to provide interchange with the LIRR at Jamaica Station, to eliminate a portion of the Jamaica BMT elevated, to provide access to the business district of Jamaica and to poorly-served residential areas in South Jamaica.

3. A subway-railroad passenger interchange center at Jamaica.

Nassau and Suffolk County residents who work or would like to work in major employment areas of Queens outside Jamaica Center, such as along Queens Boulevard, should be encouraged to take the Long Island Rail Road to Jamaica and transfer there to the IND or BMT. Conversely, residents of central and northwestern Queens could make the reverse trip if they find work in an area of Nassau or Suffolk accessible by railroad. This interchange is provided by MTA, but at the present LIRR station which is not at the hub of Jamaica Center.

4. A Jamaica Center stop for railroad service from midtown Manhattan to Kennedy Airport.

All Airport trains should stop at Jamaica to pick up passengers from subways, buses and Long Island Rail Road trains serving Brooklyn and Nassau and Suffolk Counties. This is provided in the MTA program.

Ticketing and baggage facilities for airline passengers may prove advisable at Jamaica.

Three transportation proposals. The transportation proposals and the basic design ideas demonstrated in this section are concerned with the developmental aspects of railroad and subway station locations. They differ somewhat from the MTA plans in several details.

In seeking an optimum plan for the Center's development which would tend to attract each element to the right place at the time it is likely to be located, Transportation Proposal A was devised. Proposal B conforms fairly closely to the MTA recommendations. All three Regional Plan proposals call for a subway stop on Parsons Boulevard near Union Hall; proposals A and C also call for shifting the Long Island Rail Road station eastward there.

Proposal B is somewhat less costly than A or C, but it might stimulate the construction of offices too far from the shopping, college and other facilities for easy walking. The Center would then have two, probably separate, hubs. On the other hand, Proposal A depends on an uncertain rail entry into Kennedy Airport, and Proposal C is the most costly.

Proposal A (Map 15.)

1. Removal of the last two miles of the Jamaica BMT Elevated and its rerouting, via a short tunnel under the Van Wyck Expressway, into the Hillside Avenue IND tracks.

2. Construction of a north-south subway tunnel under Parsons Boulevard, which would take IND express and all BMT trains from Hillside Avenue to Jamaica Center and continue south through South Jamaica.

3. Conversion to subway service of the Atlantic Division LIRR tracks through South Jamaica; removal of the elevated rail trestle south of the present station, which obstructs unified land development.

4. Location of the new LIRR Jamaica Station at the intersection of the new subway line with the LIRR near Union Hall, which then becomes the focal point of Jamaica Center.

5. Consolidation of all railroad service—including the Airport trains—on the Montauk Division right-of-way, which is sufficiently wide to accept additional trackage needed to replace the Atlantic Division, so it could be used for subway service (3 above). This is an appropriate arrangement because the Atlantic Division passes through several high-rise residential developments, which need a subway type of service, while the Montauk Division passes largely through an industrial area, which would be less affected by the noise of frequent high-speed through trains.

6. Entrance to JFK International Airport from the northeast through a tunnel under the runway and aprons.

The major drawbacks of this scheme are the uncertainties of entering JFK Airport in a tunnel below the waterable and under an active runway, and the cost of a new LIRR station. The total cost of the scheme, including the JFK rail connection, is on the order of \$170 million.

Proposal B (Map 16.)

1. Removal of the last 2.5 miles of the Jamaica BMT Elevated east of Richmond Hill and its rerouting along LIRR right-of-way toward Archer Avenue in Jamaica.

2. Construction of an east-west subway tunnel under Archer Avenue from the Van Wyck Expressway to New York Boulevard. This subway would connect to the Hillside Avenue IND via an existing turnout near the Van Wyck Expressway, as well as to the relocated BMT. It would have two stations: one at the existing Jamaica LIRR station, a second at Jamaica Center near Union Hall. The latter station would have turnback facilities for the BMT. The IND trains coming from Queens Boulevard would proceed south in a tunnel under New York Boulevard to join the right-of-way of



Baisley Pond Park is the most important natural asset for the community of South Jamaica. This quiet park is threatened by an elevated railroad structure if the Atlantic Division tracks are used for the Long Island Rail Road service to JFK Airport.

the Atlantic Division, to which subway tracks would be added at grade.

3. Retention of the Jamaica LIRR station in its present location, but increased stops at Union Hall station, which might become the main railroad station of the Center.

4. JFK Airport service on the Atlantic Division line, which allows an easy entry to the airport via 150th Street—though Baisley Pond Park should be bypassed. The elevated trestle of the Atlantic Division remains in place, something of an obstacle to optimum development.

5. The Montauk Division line remains as it is.

The major drawbacks of this scheme are the possibility that office development will take place too far from the Center's hub and the adverse impact of the Atlantic Division, with frequent high-speed through-train service, on areas in South Jamaica. The total cost of the scheme, including the Airport connection, is on the order of \$130 million, about \$40 million less than Proposal A.

Proposal C (Map 17.)

1. Removal of 2.5 miles of the Jamaica BMT Elevated, as in Proposal B.

2. Construction of an Archer Avenue subway with connections, as in Proposal B.

3. Relocation of the Jamaica LIRR station to the focal point of Jamaica Center at Union Hall.

4. Use of the Atlantic Division for Kennedy service, but since the tracks cannot be reached from this point, the Airport service would have to be routed south in a tunnel parallel to the subway tunnel under New York Boulevard. About 1.5 miles of Atlantic Division trackage, including the elevated trestle, would be removed.

5. Rail entry into JFK Airport via 150th Street, as in Proposal B.

This proposal eliminates the drawbacks of both A and B. Its cost is high, however—on the order of \$200 million—but it would be done over a long period of time. The LIRR station relocation could be constructed as a second stage of Proposal B, with which it is fully compatible.

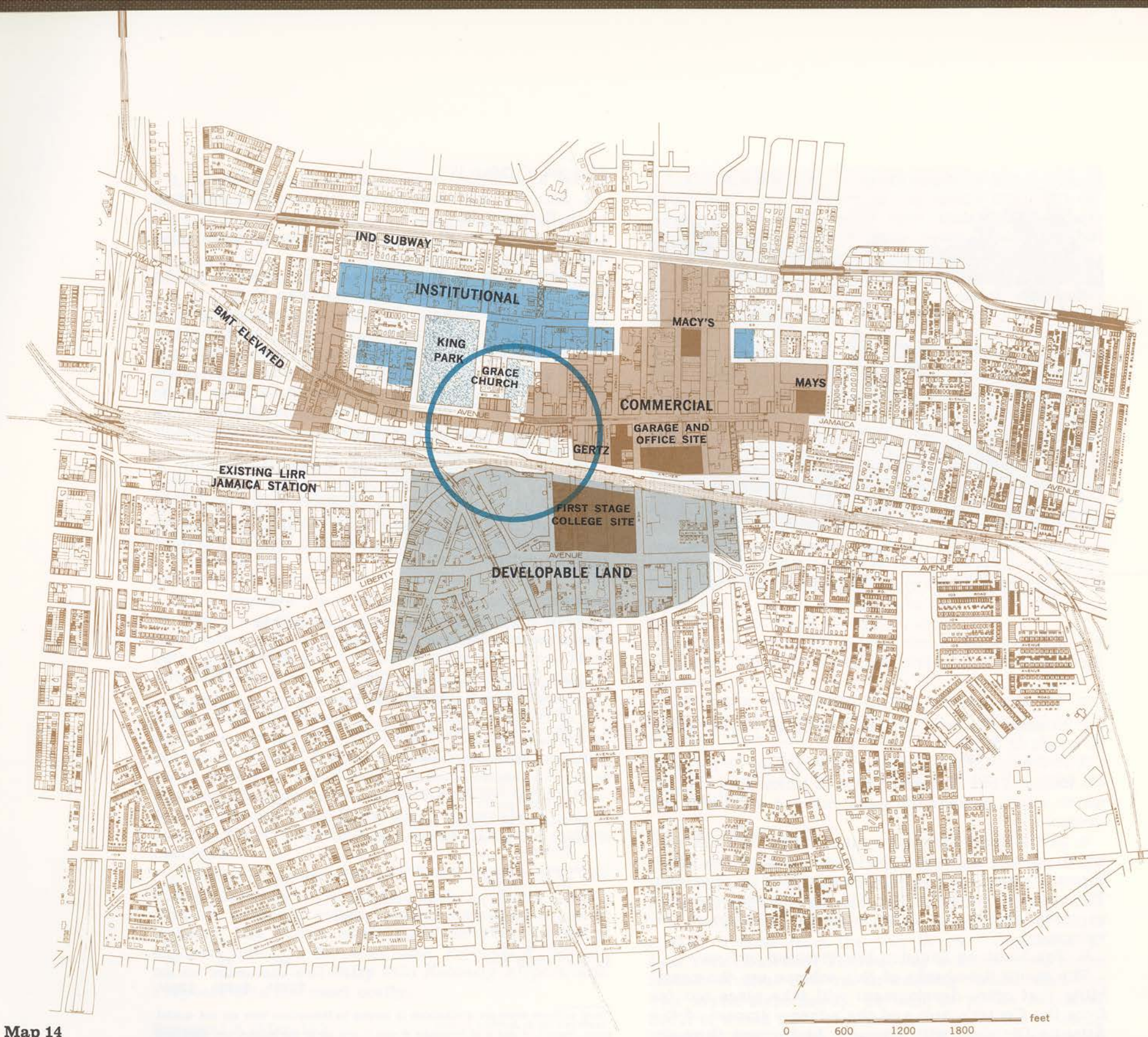
Table 8

COSTS OF THREE SUBWAY-RAIL SERVICE PROPOSALS A rough "order-of-magnitude" comparison

	A	B (millions)	C
1. BMT rerouting (east of 130th Street in Proposal A, east of 118th Street in Proposals B and C)	\$ 18	\$ 10	\$ 10
2. Station and track reconstruction under Hillside Avenue	10	—	—
3. Parsons Boulevard tunnel	20	—	—
4. Archer Avenue tunnel and connections via Van Wyck Expressway and New York Boulevard	—	70	70
5. Conversion of Atlantic Division to transit ..	7	—	—
6. Addition of subway tracks to Atlantic Division	—	15	15
7. Jamaica LIRR station relocation (approximate)	30	—	30
8. Added trackage on Montauk Division	25	—	—
9. Lowered Airport station level and placement of some Airport line trackage underground	—	—	40
10. JFK Airport link	60	35	35
	\$170*	\$130*	\$200*

*Most of these costs are attributable to service to Manhattan; they are not special costs related to Jamaica Center.

Note: Items 1, 4 and 6 of Proposals B and C add up to \$95 million, the total cost of the subway component of Proposals B and C. This is \$35 million more than the \$60 million estimated by the Metropolitan Transportation Authority as the cost of its proposal, which turns the Archer Avenue subway south along the Atlantic Division tracks immediately east of the present LIRR station and does not serve Jamaica Center at Union Hall. The \$35 million can be considered the extra cost of the 1.5 miles of tunnel in Jamaica Center and along New York Boulevard, as well as of the BMT relocation between 118th and 130th Streets.

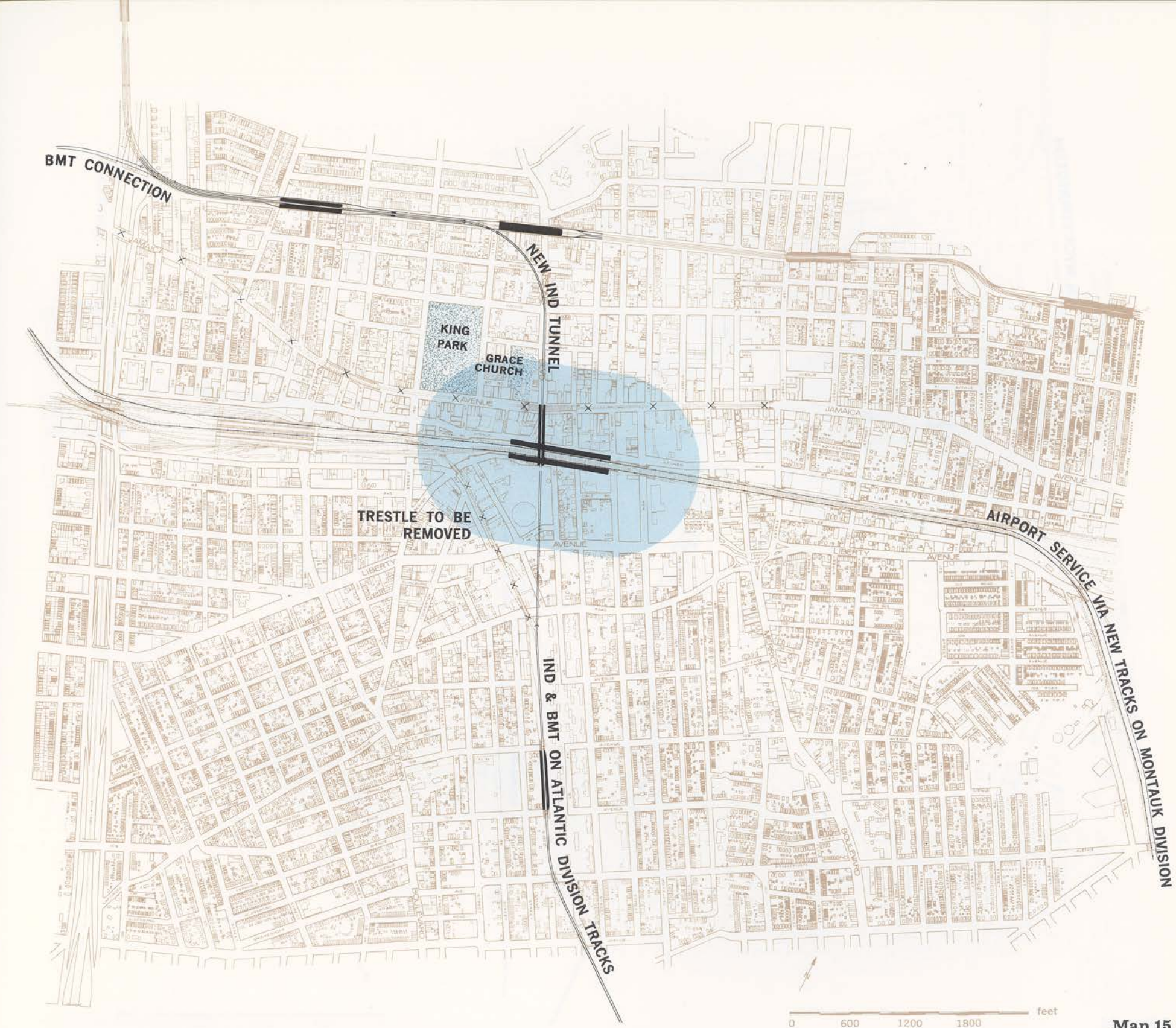


Map 14

PRESENT AND PROSPECTIVE LAND USES

Jamaica's main commercial district is located at the end of the BMT line and north of the LIRR mainline. South of the tracks and near the business district is the large, deteriorated and underused area. A college, hospital and medical school on this site would reinforce the downtown and conveniently serve a majority of the residents of Queens, including those in South Jamaica. The institutional district around King Park—with courthouse, hospital, churches, other legal

and civic activities, and apartments—is an asset to Jamaica. The best place to build offices is generally between these "strong" districts and near the site of the college and medical complex. Building in this area (shown above by the circle) would tie together the separate districts and would not displace existing important activities. New transportation for Jamaica should directly serve these present and prospective activities.



TRANSPORTATION PLAN A

This plan has a single transportation center in the best location for serving existing and future development. Subway service to South Jamaica would be in a new tunnel under Parsons Boulevard—with a station at Jamaica Avenue—and on existing LIRR Atlantic Division tracks. A new LIRR station would be built over the subway station and the airport trains would use the Montauk Division tracks. The BMT EI

on Jamaica Avenue and elevated LIRR trackage on the college site would be removed. The BMT service would be re-routed into the existing Hillside Avenue tunnel. The blue indicates the area within a 5 minute walk of the point of maximum rail transit access—the area most efficient for office development.

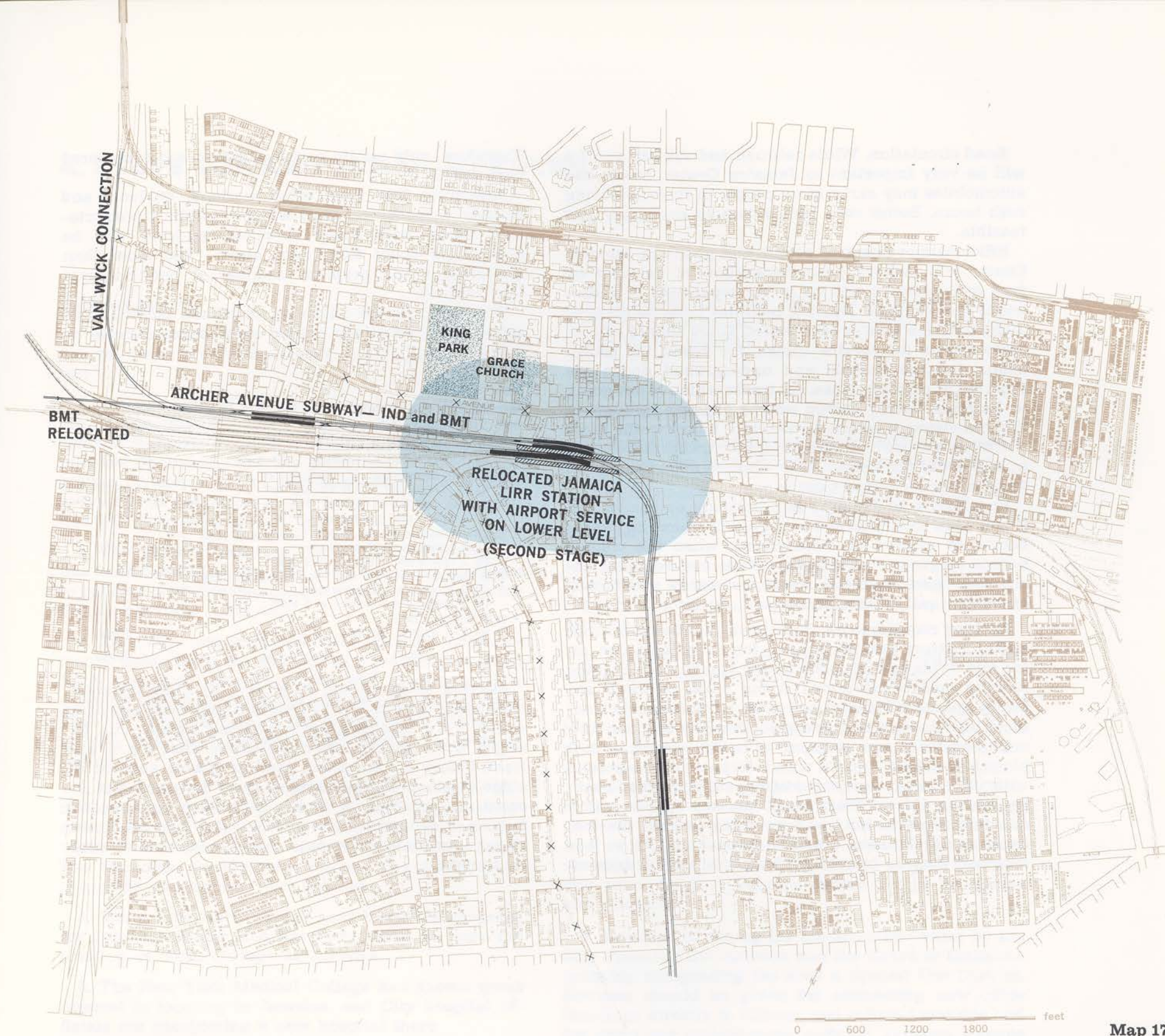


Map 16

TRANSPORTATION PLAN B

Subway service to South Jamaica would be built to interchange with the present LIRR station at Sutphin Boulevard and have another subway station at Union Hall. The BMT EI would be removed from Jamaica Avenue and the BMT and IND routed in a new tunnel under Archer Avenue. The IND would continue south under New York Boulevard, and the airport trains use the existing Atlantic Division line. This plan

would bring together four transit services — the IND and BMT subways, the airport service and the LIRR commuter trains — at a place which is not within walking distance of any of the present or prospective major activities and which has little potential for development around it. The blue is the area most accessible for office workers.



Map 17

TRANSPORTATION PLAN C

This plan would be a modification or a long range stage of Plan B. The four transit lines interchange at a single place, which is centrally located in Jamaica. The airport trains and subway to South Jamaica would use parallel tunnels.

Road circulation. While railroad and subway service will be very important to Jamaica Center, buses and automobiles may carry more people to it, even during rush hours. Better road access is both necessary and feasible.

Efficient movement of people and goods in Jamaica Center will require some separation of vehicles by type and speed as well as better separation of pedestrians and vehicles. Parking facilities must be planned along with the uses of each street. There should be separate streets for service trucks, for buses, for pedestrians. Service tunnels and underground docks are required at certain places. All traffic which is not going to Jamaica Center should not be allowed through it. This provision of selected streets for heavy traffic flows will allow the use of others for lighter traffic movements in and out of the Center. Few vehicles need operate on Jamaica Avenue, for example.

Bus service to Jamaica is now fairly extensive, but it will have to be planned as a system when the Center begins to expand in employment, when the college begins to grow, the hospital opens and retailing increases. Changes in bus routing probably will be advisable as rail service changes.

Parking requirements. Downtown Jamaica has about 2,000 off-street parking spaces for short-term use, on ten lots. (This excludes commuter spaces near Hillside Avenue subway stations.) About 1,350 of those are public spaces, all in lots and none in multi-level structures or below-ground garages. The City has commitments to build two garages with 900 spaces, and it plans to build another lot with 100 spaces and a garage with 400, adding up to about 2,000 publicly-owned parking spaces. (About 750 present spaces would be eliminated in construction.) In a growing Center, there is constant development pressure on parking lots, so it is assumed that no private parking lots are permanent.

Therefore, only public parking spaces are considered dependable.

Assuming that most office workers, students and hospital non-medical staff will use public transportation, along with many shoppers, parking will be needed for about 9,000 cars, about 7,000 more than the present and proposed number of public spaces (see Table 9).

This assumes the following additional facilities and activities in Jamaica Center's early stages of development:

Table 9

PARKING REQUIREMENTS

Added Facilities and Activities	Added Parking Spaces
• 50,000 office jobs @ 1 space per 20 workers	2,500
• 1 million square feet of retail space @ 2 spaces per 1,000 square feet	2,000
• 200 hotel rooms @ 1 space per two rooms	100
• 5,000 college students, 1,000 faculty and staff @ 1 space per 20 students @ 1 space per 3 faculty and staff	600
• 200 medical students, 400 medical school staff @ 1 space per 2 students @ 1 space per 2 faculty and staff	300
• 600 hospital beds @ 2½ spaces per bed	1,500
Total	7,000

Parking space should be shared by different activities wherever possible by locating it between activities which have complementary parking needs. For example, hotel guests, who often arrive after 5 p.m. and leave before 9 a.m., could park in spaces vacated by office workers if the garages were designed and located to provide for both. Nighttime parking for movies or college athletic or cultural events could also be accommodated in spaces used by daytime workers or shoppers.

4. STEPS TOWARD JAMAICA CENTER

Action taken

Since the study was begun less than a year ago, several steps have been taken toward a Jamaica Center.

1. The principle of the Center has been accepted by the Mayor, the President of the City Council, the Queens Borough President, the City Planning Commission Chairman, and the Chairman of the Metropolitan Transportation Authority (MTA), who now oversees the operation of the Long Island Rail Road and the City subway and bus system.

2. The Greater Jamaica Development Corporation has been formed to promote the Center, with powers to proceed with development if it proves advisable for the Corporation to do so.

3. The MTA has proposed transportation improvements, financed by the \$2.5 billion transportation bond issue and other sources, which will contribute to a Jamaica Center; discussions are proceeding between Regional Plan and MTA on adjustments needed to provide the best possible contribution to Jamaica Center.

4. Our study of business interest in the Center has revealed that if the City and MTA take steps that indicate determination to have a Center at Jamaica, business will have great interest in locating there. The Economic Development Council is actively seeking office employment for Jamaica.

5. Many community groups have heard the proposal for Jamaica Center and have organized to urge the location of York College at Jamaica.

6. The New York Medical College has shown great interest in locating in Jamaica, and City hospital officials are considering a new hospital there.

7. Three institutions of higher education, Pratt Institute, Cooper Union and Yale University, have assigned Jamaica Center as architecture and planning problems for senior students. The results of these studies,

to be completed in June 1968, will be further tests of Jamaica's potential and will add suggestions of ways to exploit the potential.

Action needed

To maintain a momentum toward building a center at Jamaica, the following steps are recommended:

1. Agreement with MTA on rail transportation plans that satisfactorily serve the Center and related communities.

2. Continuation of efforts to locate York College, the New York Medical College, a major hospital, and possibly a hotel training school and related hotel in Jamaica.

3. Appointment by the Mayor of a high-level coordinator for the development of the Center.

4. Provision of funds by the City for a highly qualified planner-urban design team, to evaluate the plan proposed here and to be ready to consider every development proposal to make sure it relates to transportation and other project proposals and that it is of high design quality. The outstanding Urban Design Team in the City Planning Department should have a role. It is very important that the first projects constructed in the Center set a standard of quality which will announce that Jamaica Center will be handsome and efficient.

5. Revision of zoning for the Jamaica Center by the City Planning Commission and the Board of Estimate, probably designating the area a Special Use District. Bonuses should be given for connecting new office buildings directly to subway and railroad stations and for providing underground parking. Jamaica Avenue should be preserved by zoning as a shopping street, not used only for offices. New apartments along Hillside Avenue should be required to provide off-street parking.



A deteriorated section at the edge of downtown Hartford, shown above left in 1953, was redeveloped as Constitution Plaza, above right, with a hotel, some shopping and about 5,000 office jobs. It is near major highways and its lower levels are parking garages. Above the garages and streets are walkways and landscaped plazas exclusively for pedestrians.



Charles Center is going up in a formerly blighted but central area of downtown Baltimore, between the shopping and government districts, shown above left in 1954. The larger buildings were kept and incorporated into the project, which has a live theatre, hotels, apartments and several office buildings. Parking for 2,500 cars is underneath. The right hand photograph shows a model of anticipated development, most of which has been completed with some modifications.



A huge railroad terminal in the middle of downtown Philadelphia, above left as it appeared in 1950, was replaced by office buildings of Penn Center. Many workers travel to Penn Center by underground mass transit, arriving there at stations that are generously open to light, air and views of the plazas above. Openings can be seen at the lower left and in the middle of the right hand photograph.

date most of these jobs that locate in the Region, but other parts of the Region will have received many headquarters offices by the end of the century.

Middle-market office employment is either related to headquarters jobs or to serving a major market of the Region. The routine, clerical or "back-office" segments of headquarters are increasingly seeking outlying locations in cheaper space with better accessibility to their labor force. District headquarters need proximity to their own sub-market and hence tend to locate within them.

Local offices are those which are primarily residence-related, serving local populations and markets. They include realtors, insurance agents, doctors, lawyers and community government, and their numbers will grow as populations increase and incomes rise. Some of these activities benefit from central locations where

and segments of the Region. The Region's headquarters have, in recent years, begun to look outside the City because there is no suitable locally alternative in Manhattan. It would be wise to encourage this trend by encouraging the location of more office jobs in the Core. This is because many places in the Core have locational advantages, the capability for handling a great deal of growth, and superior connections to Manhattan. Most of the Core needs new capital and renewed support by the middle class. Regional Plan Association recommends an increase of about 200,000 office jobs in the Core outside the Manhattan central business district during the next three

NEW CITY CENTERS

Central areas are being rebuilt in many of the older cities throughout the nation. In most cases, the problems were awesome and the skeptics were many. Faith, perseverance, planning and good urban design have produced some notable successes.

6. State, City and joint private-public programs to stimulate the location of more office jobs in New York City parallel to existing programs which promote the location of industrial jobs in the City; more training programs to prepare persons in the area who are not now adequately educated for office employment.

7. New York State support for the idea of a Jamaica Center and exploration by the State Office of Planning Coordination of forthcoming State actions and present and proposed State powers that would contribute to it.

8. A plan for humane relocation of the few families now living in areas that will be needed for new activities.

9. A program to inform businessmen of the potential of Jamaica through various media as well as face-to-face.

10. Additional presentations of the detailed proposal

for Jamaica Center to the community planning board and other community associations.

11. Broadened participation and leadership in the Greater Jamaica Development Corporation.

12. Exploration of the possibility that the Corporation, a governmental agency or a joint organization formed by the Corporation with a governmental agency might purchase key parcels of land to accelerate land assembly for public and private agencies, to assure the best possible location for new investment and to avoid less than optimum use of important parts of the Center. The Southeastern Pennsylvania Economic Development Corporation has done this in Philadelphia. Since it is public initiative and investment that will bring about this center and consequently raise land values substantially, it is reasonable for a public agency or one devoted to building a great center to own the land in the first instance and gain for the Center, or for the public generally, the added land value that will accrue.

APPENDIX

1. Projections of jobs in office buildings in the New York Metropolitan Region, 1965-2000

Regional Plan Association's projection of jobs in office buildings was part of an economic analysis of all types of jobs, published in May 1967 in *The Region's Growth*.

Because they need to cluster, because they are the most rapidly growing form of employment, and because they generate clustered supporting employment, office jobs are the key ingredient in the revival and creation of urban centers.

There are three classes of office employment in the Region with relatively distinct but interrelated locational needs: headquarters, middle market and local office.

Headquarters offices are concentrated in Manhattan, making New York City the nation's capital of corporate executive offices. This type of office seeks locations of national or regional prominence. Executives, executive staffs and personnel directly in support of decision-making activities constitute the purely headquarters jobs. Manhattan will continue to attract and accommodate most of these jobs that locate in the Region, but other parts of the Region will have received many headquarters offices by the end of the century.

Middle-market office employment is either related to headquarters jobs or to serving a major market of the Region. The routine, clerical or "back-office" segments of headquarters are increasingly seeking outlying locations in cheaper space with better accessibility to their labor force. District headquarters need proximity to their own sub-markets and hence tend to locate within them.

Local offices are those which are primarily residence-related, serving local populations and business. They include realtors, insurance agents, doctors, lawyers and community government, and their numbers will grow as populations increase and incomes rise. Some of these activities benefit from central locations where

they are near courthouses, hospitals or banks, but many will continue to disperse in accordance with population patterns.

Regional Plan Association has projected increases in these three types of office employment from the present 1.6 million jobs in office buildings to 3.0 million by the year 2000—almost a doubling.

The number of office jobs recommended for Jamaica Center is 50,000 in the short-range—perhaps by 1985—and 100,000 by the year 2000. Measured by the regional scale, these figures are conservative. Compared to Queens, which now has about 70,000 jobs in office buildings in the entire Borough, and to present-day Jamaica with its 9,000 office jobs, the goals may seem ambitious.

The Manhattan central business district (south of Central Park), with 52 percent of the Region's total, has about 800,000 jobs in office buildings. The Region's Core outside the Manhattan central business district now has about 345,000 office jobs, or 22 percent of the total in the entire Region. The rest of the Region, outside Manhattan and the Core, has 410,000, or 26 percent.

But the Core has been receiving a very small share of the recent office growth (see Chart on page 12). Office employment of the types which do not need to be in Manhattan have, in recent years, frequently been located outside the City because there is no suitable in-City alternative to Manhattan. It would be wise to moderate this trend by encouraging the location of more office jobs in the Core. This is because many places in the Core have locational advantages, the capability for handling a great deal of growth, and superior connections to Manhattan. Most of the Core needs new capital and renewed support by the middle class. Regional Plan Association recommends an increase of about 235,000 office jobs in the Core outside the Manhattan central business district during the next three decades.

Of the new offices in the Core, some of those in the local class will be somewhat dispersed. But employers of most of the 235,000 office jobs recommended will be seeking central locations from which to draw their

workers and serve wider markets than one or a few neighborhoods. These should be encouraged to locate in one of the three largest centers in the Core—Newark, downtown Brooklyn and Jamaica. Smaller centers in the Core, like Jersey City, the South Bronx, 125th Street in Manhattan, Flushing and Long Island City probably should also be enlarged with office employment.

All of these places in the Core have the capacity for new growth. But all have environmental deficiencies that are limiting their attractiveness and hence their competitive positions vis-a-vis outlying areas. Many employers who would find Jamaica unsuitable now, despite its good location, could be attracted to a Jamaica Center which provided a good, prestigious environment and an opportunity for corporate distinction.

Analysis of some existing large central business districts has indicated that for every 2 office jobs, there is about 1 other job. Hence 50,000 more office jobs in Jamaica would support about 25,000 other jobs, including 5,000 supporting service jobs like duplicating, equipment rental and building maintenance.

2. Reasons for locating York College in Jamaica Center

Regional Plan Association has set forth the following reasons for locating York College in Jamaica Center:

An adequate site on schedule. We understand that New York City is prepared to make available cleared land in Jamaica so that a college building program could proceed in scheduled stages to a site of about 60 acres. For the proposed 12,000 students, this would mean a density of 200 students per acre. Campuses elsewhere in the world have demonstrated that this is sufficient for a beautiful and efficient campus and that good design can provide amenity of many kinds, including quiet areas for retreat and withdrawal.

The New York City Housing and Development Administration architects have presented one design of how this might be done. Therefore, Jamaica meets the criterion of adequate land available in the scheduled time.

Cost. Comparison of the relative cost of the sites under consideration is clouded by the possible availability of Fort Totten for \$1. But Fort Totten is not without value to the City and the Borough. It is "free" only from the point of view of the College, and its unique

value as a park probably exceeds its value as a college campus. Furthermore, location of a 12,000-student campus there would require transportation investments, e.g., access roads to the Cross Island Parkway, perhaps widening of the Parkway itself, and costly special bus service from several parts of Queens and/or from the rail-bus confluence at Jamaica. On the other hand, Jamaica already has adequate transportation service for the College, and prospective transportation improvements there will serve many institutions and businesses in and beyond the Borough, not simply the College. We feel, in short, that costs of the sites should be compared on the basis of total City and State costs required to develop each site, plus the value of each site's alternative uses.

In any case, a college is a very long-term institution. The original investment for land must not be the overriding consideration in choosing a location. A generation from now, the wrong location chosen because it was cheap will look extremely short-sighted.

Accessibility. York College President Dumont F. Kenny has stated (in *The Building Program of the City University of New York*): "The greatest pressures on the university system are in Queens and Brooklyn, and therefore the college will be located for easy accessibility for students in those boroughs." We agree that accessibility of the college to students is a prime consideration.

Since York College is part of a tuition-free university whose purpose is to facilitate college attendance by everyone in the City with the academic capability, the location of York College should assure that no one is deprived of attending for such irrelevancies as not owning a car or not being able to find work convenient to the college. One-third of the families in Queens and over half the families in Brooklyn did not own even one car according to the last census (1960). About 9 male college students out of 10 around the country earn money to support themselves, according to the 1960 Census.

Only Jamaica in all of Queens has direct public transportation from the entire Borough and from Brooklyn. This is very important because a four-year college serves a wide geographical area, and—as we understand it—at least 80 percent of the students will commute regularly. About 85,000 college-aged residents of Brooklyn and Queens live within thirty minutes of Jamaica.

As to part-time work for students, more jobs will be more easily reached from Jamaica than from almost any other site in Queens, and varied employment right in Jamaica seems likely to grow.

The current necessity to break the cycle of poverty and to bring Negroes and Puerto Ricans into the full life of the nation adds emphasis to this point of accessibility to all potential students. Attendance figures at units of the City University tend to show that accessibility is related to the percentage of Negro and Puerto Rican students now attending units of the City University. (**Report of the Fall 1967 Undergraduate Ethnic Census**, The City University of New York.)

Of course, in New York City, it is not simply those without cars who use public transportation to work and study. Indeed, without very high reliance on public transportation for trips during the working day, New York City cannot achieve its potential, because the City is arranged compactly to take advantage of proximity. If every institution seeking a new location in New York City assumes that almost everyone will reach it by automobile, the City's highway system will be overwhelmed.

To York College's faculty, a Jamaica campus offers infinitely more choice of housing and neighborhoods, both city and suburban, than any other site under consideration. With the Long Island Rail Road about to double its speed, nearly the entire length of Long Island, from Brooklyn to the middle of Suffolk County, will be within easy commuting distance, as will Manhattan. Jamaica also is convenient to many pleasant Queens neighborhoods.

Supplementary educational facilities around the City also would be more accessible, including other units of the City University, the New York Public Library and the Queens Public Library (especially valuable in the early years of the College as its own library is being built), theatres, museums and opportunities for live research (e.g., in business practices, public administration, sociology).

As the York College Bulletin states, "New York City is the greatest laboratory in the world for teaching and learning in the context of urban life . . ." These types of facilities will be in Jamaica increasingly; such facilities are much more easily reached from Jamaica than from the other sites under consideration, except possibly Sunnyside, since public transportation is essential for such trips during the working day. For

example, to reach the Graduate Division of the City University or the New York Public Library, it would take a student 35 minutes from Jamaica but about twice that long from Fort Totten, using public transportation (and, in fact, not much less time for the few who might drive from Fort Totten, considering the difficulty of finding parking space in Manhattan).

A final advantage to York College of the superior accessibility of Jamaica is the possibility of an affiliation with the New York Medical College. We are informed that this College is seeking a site in Queens or Westchester County close to a four-year college, but that it also must be close to a hospital—which, in turn, must be easily accessible to a large patient population. In Queens, only the Jamaica vicinity could offer this juxtaposition. This is only one example of the opportunities that a central site always offers.

The College and the Jamaica Center. The location chosen by York College is important not only for the full-time students but also for the effect on the community which it enters.

York College would be a major stimulus to building a great center of offices, education, culture, retailing and health services in Jamaica. There are many important advantages of such a center. **For Queens**, it would provide a focus for a real community and probably would provide much better services, particularly health and library services, than otherwise would be available. **For New York City**, it would attract more office jobs than the City otherwise would have. This would strengthen the City's tax base. More important, it would retain the allegiance to the City of many who would be working in the City if these offices located in Jamaica but who otherwise would turn their backs on the City if their jobs moved outside. **For York College**, a growing center would mean far better all-day transportation, jobs for students, walk-to-campus apartments for students and faculty, and other community facilities and educational supplements.

Many businessmen are interested in moving enterprises to Jamaica if there is a clear indication that it will indeed become such a center. They are impressed by the strong support of the Mayor, the Council President, the Planning Commission, the Borough President and numerous neighborhood groups for the idea of a major center there. Placed and designed to fit with other components of a major center, York College is the concrete sign of public commitment that some business investors are awaiting.

A major center at Jamaica may seem unimportant to those concerned with the best location of the College. But we recall the keynote speech at the York College inauguration last year by William Arrowsmith, a member of the York College Council on Academic Development:

What I am suggesting is that the university is unconsciously helping to create a new and special modern chaos, in which the environment as a whole is nobody's business and bears nobody's design—a conglomerate whose total disorder is exposed by the ruthless design-perfection of the parts and their unrelatedness.

Direct effects of a college on the community. A question has been raised as to whether a college can in fact strengthen its surrounding neighborhood.

Where colleges have made an effort to work with the community, many have indeed provided a significant upward thrust. Without Yale, for example, there would have been no New Haven renewal of the present scope and quality. The question is not whether a college can help to improve neighborhood conditions; it is only whether a college is motivated to do it.

York College in Jamaica could assist the nearby community not only indirectly by initiating the move toward a great urban center but also directly by providing a symbol to remind residents that higher education is available to all in the City who qualify academically, by offering extension services and by cooperative support of concerts and other cultural programs.

The potential for constructive interaction between town and gown is especially great in Jamaica because all of the civic organizations in the area are enthusiastic about the College locating there.

Summary. Probably the overriding issue in the location of York College is: whom is it to serve. If it is truly to serve any qualified student in Brooklyn and Queens, it must be in Jamaica. Any other site would exclude some who are unable to afford a car or to attend college without working, and who would not find the college accessible or a job convenient on any of the peripheral sites.

In general, accessibility is extremely important for York College—to ease student commuting without straining the City transportation system, to offer the faculty a wide range of housing choices, to enable students and faculty to take advantage of other City educational and employment opportunities.

Enough land in Jamaica appears to be available in time to meet the College's schedule. On the other hand, the open land of some proposed sites is valuable for outdoor recreation, which is in very short supply in the City.

Finally, York College could provide stimulus to make of Jamaica a major commercial-cultural-educational-health center, benefiting the College, the adjacent communities, the Borough and the City; and it could provide hope and help to Southeast Queens.

3. New York Medical College

Queens has no medical school at present, and the service of its hospitals would undoubtedly be enhanced by medical education.

The proposed departure of New York Medical College from Manhattan offers a special opportunity for Queens. Locating this school in Queens and tying the municipal health services of the Borough to it, as the City has suggested doing, could have great positive effect for Queens residents. This medical school has a long record of good and broad service to urban residents.

The location of the medical school will necessarily be near a new or expanded existing hospital, and it will need proximity to a university for efficient collaboration. If a new teaching hospital is to be built, the most satisfactory location for hospital and medical school might well be Jamaica. The best site would be near the proposed site for York College, which is close enough to the business area, subway stations and bus stops of Jamaica Center for convenience but far enough away to avoid the noise. The site is also near the Van Wyck Expressway and Long Island Rail Road, two other transportation advantages. If York College is placed on the adjacent site, it could complement the medical school and hospital by providing such academic programs as laboratory sciences, nursing and hospital

administration. Collaboration is also possible with other nearby, established universities, such as Queens College.

The linkages are clear. Hospitals need medical schools, medical schools need universities. All need proximity to each other. All need easy access by public transportation as well as automobile. Particularly, the hospital needs to be reached easily by its patient population.

4. Medical care

Hospitals are developing into great multi-service health centers. As Marvin Roth, Research Consultant for the Hospital Review and Planning Council of Southern New York, has said, "The hospital of tomorrow will be the local community health center, providing preventive, diagnostic, and therapeutic programs and facilities for all segments of the community—rich and poor—on an ambulatory as well as inpatient basis."

New York City's 104 hospitals—municipal, voluntary and proprietary—treat about 1 million inpatients and 7.5 million outpatients annually. But the locations of many of these hospitals reflect old population distributions so that some areas in the City are under-served.

The Borough of Queens is deficient in facilities for certain aspects of health care. It has the lowest ratio among the five City boroughs of beds per thousand population and the lowest ratio of beds per population in hospitals open to all regardless of ability to pay. There are 21 general care hospitals in Queens, with a total bed capacity of about 5,400; about 3.1 beds per thousand residents.

This implies that at least one-third of Queens residents go outside the Borough for inpatient hospital care. Some of them do so by choice, but some probably do so for lack of choice.

General care hospitals in Queens. Almost 40 percent of the general care beds in Queens are in proprietary institutions, many of which provide only inpatient care and no emergency, outpatient or ambulance services. An additional few hundred beds are in institutions which can be considered substandard or inadequate.

Queens, with its presently large and growing population, probably needs several hundred additional

general care beds in hospitals with a wide range of services.

The City is planning to provide about 600 more hospital beds in Queens, and several voluntary or proprietary institutions may expand by 400 to 500 beds. Providing these additional beds probably would not mean a net increase in the number of general care beds in New York City but rather a redistribution of them. Manhattan, for example, has about 13 beds per thousand people, and its population is declining. It may not be reasonable for Manhattan to continue providing City-wide general care hospitalization. Brooklyn has about 4.5 beds per thousand.

Determining the number of general care beds required for Queens involves both measuring the use of existing facilities in and outside the Borough and judging whether such use makes for good care and for convenience to patients. But assuming that half of the patients who leave the Borough for general care hospitalization would prefer not to do so, a case can be made for well over 1,000 additional beds. This is based on present population and does not reflect projected population increases in Queens. On the other hand, it does not reflect increased and better preventive medicine programs in ambulatory care centers either; this could reduce the required number of beds.

Outpatient services for a given population must also be located to serve that population best. Queens may have enough of these services on a Borough-wide basis, but their locations are not always the right ones. South Jamaica, for example, is significantly deficient in local services, and the problem is aggravated by poor accessibility to facilities outside that community.

The locational requisites for new general care hospitals are theoretically simple—proximity to their patient population and easy access to patients and staff. This usually means a site that is both geographically central to the patient population and well served by transportation. Inexpensive, convenient public transportation is an increasingly important locational criterion as life expectancy and outpatient services increase and as proprietary and voluntary hospitals increase their services to older and medically indigent residents of the City.

The Hospital Review and Planning Council has defined a standard by which to judge hospital availability: "Every resident should have available for his

use a general hospital, with an adequate array of basic services, within thirty minutes travel time." This would seem to be a minimum standard.

Special care hospitals in Queens. Most special hospital care is presently available to Queens residents only if they travel to other boroughs. There are few beds for chronic diseases, physical rehabilitation or geriatrics. These facilities often serve the entire metropolitan area and require long but relatively infrequent trips by patients; the time a patient spends in these hospitals is usually much longer than he spends in general care. Nevertheless, proximity to the patient's family may be important. The long-term beds on Welfare Island are within a reasonable distance of most Queens residents.

Altogether, the number of people now living in Queens and expected increases and changes in the age and character of that population suggest the need for more special care facilities of certain types in the Borough.

Hospitals in Jamaica. There are two municipal hospitals in Queens: Elmhurst and Queens Hospital Center. Elmhurst, in the densely populated northeast section of the Borough, is accessible by subway, bus and auto. Queens Hospital is an old and in some ways obsolete plant, with some locational deficiencies as well. It is reachable chiefly by automobile. Bus service to it is not adequate from many sections of the Borough. This poor accessibility of Queens Hospital Center restricts its potential for wide service.

Jamaica's accessible position in the Borough and the number of people within short travel times of it make it a good location for a new hospital for Queens. The two existing voluntary general care hospitals in Jamaica, Mary Immaculate and Jamaica Hospital, have a total of about 600 beds. Both are planning to expand. Mary Immaculate will also construct a new Medical Research Center on land adjacent to its present site along King Park's northern side. The effects which a large new municipal hospital would have on these hospitals would have to be assessed.

Medical schools, hospitals and universities have become quite interdependent. Internship and residency are not only important phases in the development of physicians but are services which make significant contributions to the quality of medical care in a hospital. Medical schools must thus affiliate with hospitals

in order to teach their students; hospitals need medical schools in order to staff their facilities and elevate their services. Universities need both for active scientific interchange. Affiliations of medical schools with universities mutually broaden and complement academic programs for faculty and students.

Municipal hospitals without university affiliations have difficult staffing problems. New York City's Deputy Health Services Administrator, James G. Houghton, has said, "Our [hospital] plans in the boroughs are tied to the medical schools. They should be the center of major medical complexes."

5. The need for rail service to John F. Kennedy Airport

Travel to John F. Kennedy International Airport, which handles almost 60 percent of the Region's air passengers, is severely handicapped by congestion on expressways through Queens in peak periods. The development and high population densities around the Airport make it unlikely that highway expansion will be the means for alleviating the problem.

Today, the scheduled travel time of the special bus from the East Side Airlines Terminal in Manhattan (which itself is eight blocks from the closest transit station) is 45 minutes during non-rush hours and 55 minutes during rush hours. Passengers are advised to leave Manhattan at least 1½ hours before flight time to make this 15-mile trip. Airport trips by car from other areas of the Region are likewise inconvenient and time-consuming.

The Port of New York Authority and Metropolitan Transportation Authority are conducting a joint study of rail service to the Airport.

Trips from Manhattan to the Airport by rail, which would begin at a more central midtown location, would take 30 minutes to reach a central location in the Airport with present trains and roadbed; with the new equipment, improved roadbed and signaling programmed by the Long Island Rail Road, the time would be about 20 minutes.

Extension of the Long Island Rail Road to Kennedy Airport, therefore, offers considerable promise as an important and major improvement in ground access. Such a service would require solving a number of major problems, including location and design of Man-

hattan terminals, alignment of the rail link itself, and alternative distribution systems and configurations at Kennedy Airport.

The Long Island Rail Road is now owned by a public authority—the Metropolitan Transportation Authority—which has capital funds available for both rail and airport improvements.

In 1967, the average daily one-way trips into JFK Airport were:

Airline passengers	20,250
Employees	26,500
Visitors and others	27,000
Total	73,750

Source: Port of New York Authority

Nearly half of all JFK-bound passengers start their trip to the Airport in Manhattan, and 10 percent of the daily air trips occur during the rush hours. Thus, the present volume from Manhattan is enough to fill three 3-car trains in the peak hour (or 50 helicopters) with air passengers only.

But, clearly, persons other than air passengers from Manhattan could use this service and benefit from it. A moderately priced service with intermediate stops and a convenient connection at Jamaica with subways, buses and suburban trains could attract employees, visitors and air passengers from Queens, Brooklyn, Nassau and Suffolk Counties.

The introduction of very large aircraft (today's B-707 has a maximum capacity of 180 passengers; the B-747 "Jumbo Jet," now in production, will have a maximum capacity of 490 passengers) will soon increase airport passenger traffic to an extent which will make rail service not only warranted but essential to handle the volumes, and to provide fast, dependable service, unaffected by highway congestion.

By 1975, air passengers at JFK are expected to double, according to Port Authority forecasts, and more than triple, according to FAA and aviation industry forecasts. If motor vehicle entries into the Airport during the peak hour, which now amount to 5,500, are allowed to increase proportionately, a doubling of the existing inbound expressway lanes and triple decking of the parking lots would be required. Assuming these enlargements would be operationally feasible (it is questionable if the circulation of so many vehicles and people could be satisfactorily solved with the present Airport configuration), the service would not be improved, and the discrepancy between quick, com-

fortable airport-to-airport travel and long, arduous airport-to-city travel would be perpetuated.

By 1980, the Port Authority expects the IFR (Instrument Flight Rules) peak-hour capacity of the runways at JFK to increase from the present 47 to 74 aircraft. Adding new runways in Jamaica Bay could further increase this figure to 110. Assuming this to be the "ultimate" capacity and assuming an increase in the average number of passengers per airplane from today's 50 to 200 by the year 1995, peak-hour passenger movements will approach 20,000. With visitors and employees, the volume would require rail (or similar to rail) service, with or without helicopters.

There are several routes under consideration for rail service to Kennedy Airport. Most of these are based on use of the Long Island Rail Road, which has higher-speed capability than the subway and can provide a higher level of service, including provision for baggage and perhaps onboard ticketing. Also, the railroad's many branches can provide transfer connections to Brooklyn and all of Long Island. This, of course, requires interchange of passengers at Jamaica, the railroad's main junction where all but one of its branches meet. This locational "accident" of a major rail junction at Jamaica leads to even greater advantages. Interchange is possible there with the local bus network and with the subways. Thus, by establishing one main Airport route, Manhattan to JFK, and by creating a new convenient interchange, the route can be fed by all the transportation services regularly available. It could be used daily by Airport employees for their journey to work as well as by airline passengers.

It might be useful to establish a ticket selling and baggage collecting area at the Jamaica interchange—in fact, to use it as an in-city airline terminal with all the ancillary facilities and services.

6. Jamaica Center: Credibility of Concept

By Salvatore E. Manzo, consultant to Regional Plan Association; now Director of Aviation, Houston, Texas

1. Introduction

1. The purpose of this part of the Jamaica Center study was to test the credibility of the concept of establishing the central business district of Jamaica, Queens, as a major regional subcenter.

2. The following contacts were made:

a. Letters describing the concept were sent to the New York-based chief executive of fifty-six companies in the electrical machinery, chemical/pharmaceutical, life insurance, banking, petroleum, tobacco, food, utility, airline and miscellaneous fields. Follow-up contacts were made with all companies, and discussions were held with forty-two of them.

b. Interviews were held with four property development and management company executives.

c. Interviews were held with officials of the New York City Planning Department and Housing and Development Administration.

2. Findings

1. While the Manhattan-based companies contacted all rate Manhattan as the prime office location, there is widespread agreement in the business community that the concept of developing regional subcenters is essential if the Region is to achieve the growth in office employment of which it is capable, and in a manageable manner. The projections of Regional Plan for the increase in office employment were not questioned, and the growth forecasts of the companies responding, while usually limited to about five years, tend to verify a substantial rate of growth. Some of these companies have already commenced or are examining decentralization of office functions to locations outside Manhattan.

2. Few companies had ever considered Jamaica as a possible location for office facilities, largely because of its environment and image, the unavailability of office space, and the lack of knowledge of Jamaica's existing and potential assets. Some were interested in more distant locations or suburban settings with automobile orientation. Following an explanation of Jamaica's attributes and proposed development program, many agreed that if Jamaica's image is reshaped, if it is developed as a total community (shopping, entertainment, education, transportation, etc.), and if an aggressive promotion program is instituted, companies would consider locating expansion or secondary offices there. Some companies contacted indicated possible interest in locating offices there within the next two to five years.

3. The most significant considerations for locating offices outside of Manhattan are:

a. Public transportation.

b. Quantity, quality and stability of labor pool.

c. Operating costs (personnel and office rental).

d. Environment and image of area.

e. Employee amenities (shopping, etc.).

f. Highway access and automobile parking (for those interested in suburban areas).

4. Governmental programs which will change the environment and image of Jamaica, such as establishment of a college there and removal of the BMT Elevated subway line, and improvement of the rapid transit, railroad, bus, traffic, and parking systems are essential to reinforce the confidence of the business community in the Jamaica program and thereby enhance the speed and success of its accomplishment. The tight money market and the continuing availability of proven investment opportunities elsewhere also emphasize the need for positive and constructive government actions to get the Jamaica program started.

5. As a supplement to private assembly of land parcels for development, an urban renewal program should be established in order to permit use of municipal powers of eminent domain. The possibility of obtaining federal grants for planning and execution as a demonstration project for regional centers should be explored. If it is not possible to obtain governmental financial assistance, the urban renewal program should be established on a financially unassisted basis as permitted by Article 15, General Municipal Law, State of New York. Officials of the New York City Planning Department and the Housing and Development Administration are favorably disposed to recommend establishment of an urban renewal program without financial assistance, subject to an investigation of the blighted conditions and the results of a market study to evaluate the economic feasibility of the project.

6. Jamaica business interests must provide the initiative and much of the operating capital required to organize and promote the program if outside assistance and investment are to be attracted. They must be openly and publicly involved.

7. Companies throughout the metropolitan area are experiencing difficulties in recruiting and retaining good quality office personnel. The new and stable labor pool available to Jamaica offices is a valuable asset and should be exploited.

8. In addition to reduced operating costs through a better quality and more stable labor pool in Jamaica, companies will also expect a saving in rental costs over what they customarily pay in Manhattan.

9. Jamaica is not a favored location for the many commuting executive and management personnel who live in Westchester, Connecticut or New Jersey suburban areas where travel to Jamaica by public transportation would be inconvenient. Jamaica access by automobile from Westchester and Connecticut is good, and enough parking should be available for the executives living there. Of course, executives living on Long Island would find Jamaica highly accessible. In any case, secondary offices, which are likely to be attracted to subcenters in large numbers, have relatively few high level executive employees.

10. Many companies are experiencing space shortages in Manhattan. The vacancy rate for competitive office buildings is the lowest since 1957. While new office space in Manhattan is being constructed in record-setting quantities, current and committed future rental rates reflect optimism among office building managers on the unprecedented strength of the office rental market.

11. There is unanimous agreement among the airlines contacted that a rail link connecting John F. Kennedy International Airport and Manhattan, through Jamaica, is vital to accommodate the growth in air passengers and for transportation of Kennedy employees. Such a service would greatly relieve highway and parking congestion.

12. The establishment of an airline passenger terminal in the proposed transportation center in Jamaica is presently not considered justified by most of the airlines contacted. It may evolve as a future requirement depending upon:

- a. Increases in passenger traffic at Kennedy.
- b. How Jamaica develops into the office and transportation center visualized and thus becomes an important point of passenger origin or destination or a significant location for changing surface transportation mode in traveling to Kennedy, and,
- c. The development of improved baggage handling techniques for use at remote locations.

7. Vehicle circulation and parking

Changes in the street pattern and some additional parking facilities will be required by a new Jamaica Center.

Streets. An important part of a revised street system will be a new street, primarily for service and for feeding parking garages, parallel to Archer Avenue and located south of the railroad tracks. This new service street would extend from Sutphin to Merrick Boulevard, using sections of 94th Avenue and Beaver Road and new construction from 159th Street to Merrick.

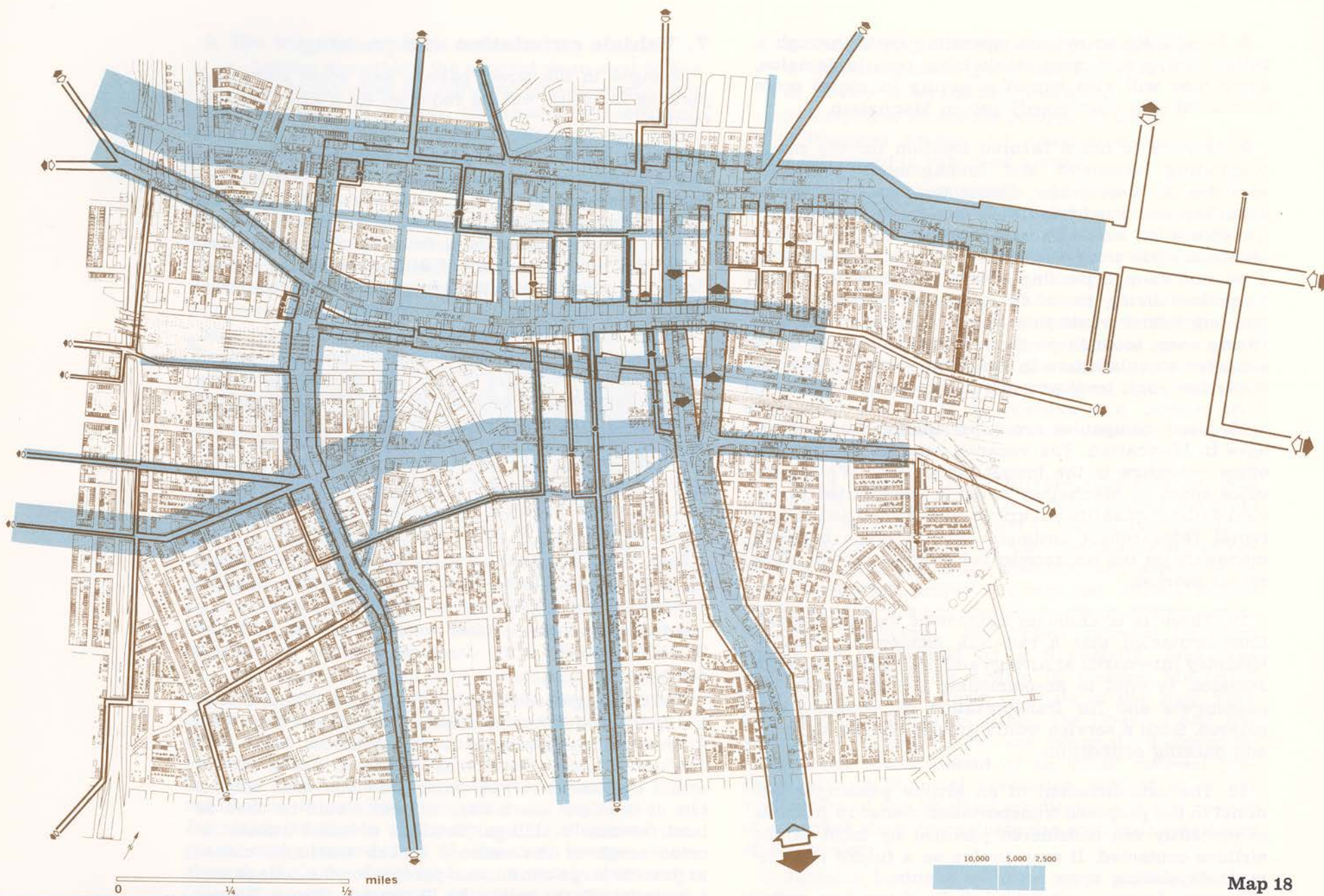
Traffic can move reasonably well on existing east-west streets, but north-south flow should be improved significantly. Two pairs of one-way streets, the streets in each pair going in opposite directions, are suggested to connect Hillside Avenue to Liberty Avenue. The eastern pair exists and presently operates as such; it is 168th Street and Merrick Boulevard. The western pair would be comprised of Sutphin Boulevard and a parallel street provided by connecting Waltham and 146th Streets with a new railroad underpass.

New York Boulevard and 163rd Street both should be widened to allow them to join across Jamaica Avenue and to function as a single street.

Another important street which should be widened is 150th Street, from Jamaica Avenue to Liberty Avenue.

Streets suggested for closing are 151st, 152nd, Standard Place and Twombly Place; 160th Street from 90th Avenue to Archer Avenue; 161st Street from 90th Avenue to Jamaica Avenue. Some of these streets would be turned to pedestrian and bus uses only; a few of the very short, narrow ones would be used as land for new buildings. Sections of some streets located south of the railroad tracks would be closed to provide large continuous parcels for the college and a hospital. These might be Tuckerton Street, Beaver Road, 160th Street, Dale Road, Union Hall Street and Clayton Road.

Liberty Avenue is shown on the plans as a depressed highway leg from the Van Wyck Expressway to Merrick Boulevard. Eventually such a highway would probably be extended eastward to the Belt Parkway. Substantial improvement of Liberty Avenue might be a substitute for this highway.

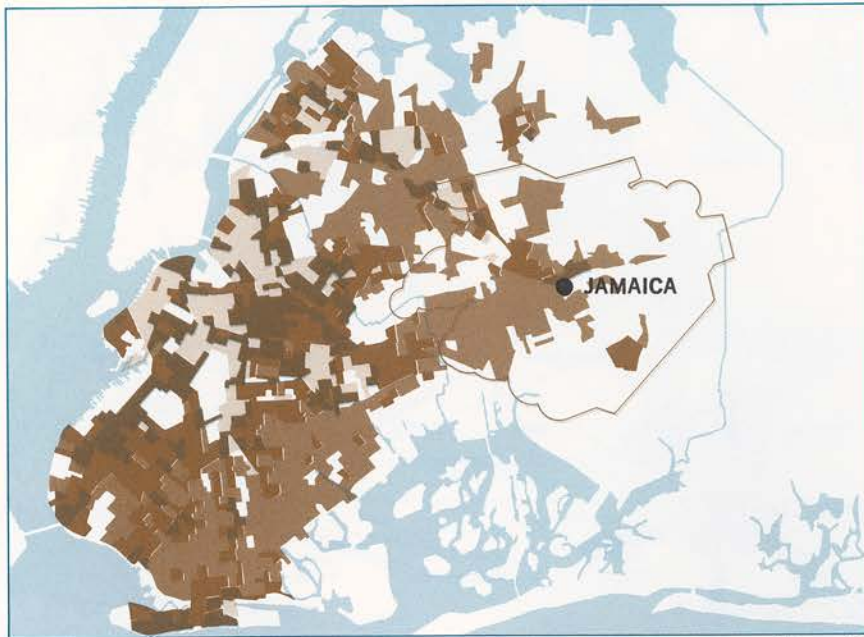


Map 18

Hillside, Jamaica and Liberty Avenues are most heavily traveled by cars and buses going east and west. Sutphin and Merrick Boulevards are the big carriers of north-south traffic. Vehicles thus tend to circulate around the main sections of downtown Jamaica—a generally efficient traffic pattern. With some street modifications, well-placed parking facilities, more off-street loading areas for buses, and use of some streets for service trucking, superior accommodations for vehicles could be provided.

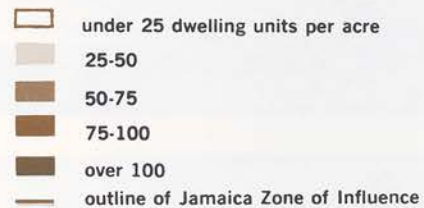
DAILY TRAFFIC VOLUMES

- persons 24 hours by bus
- by auto



Map 19

HOUSING DENSITY By Census Tracts

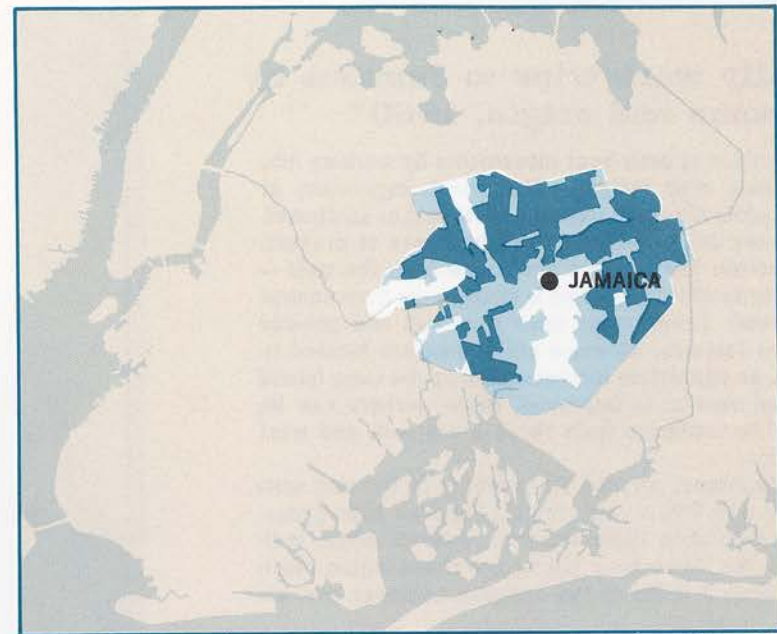


8. Housing density, median incomes, and residential construction in the Jamaica area

Jamaica is situated between high density residential areas of Brooklyn and northwest Queens and low density suburban areas of eastern Queens and Nassau County. (Map above.) The brown line defines Jamaica's primary zone of influence—the area within which persons can reach Jamaica in 20 minutes, or less, of travel time. This zone is now about equally divided between high and low density residential areas. The pressure for apartments in Queens could result in a continuation of the sprawling, roadside development; or some of the suburban qualities could be protected by concentrating apartments in a limited number of places, like Jamaica Center and along transit lines.

The incomes of most families living within 20 minutes of Jamaica Center tend to be above the median income levels of both Queens Borough and New York City. (Map at upper right.)

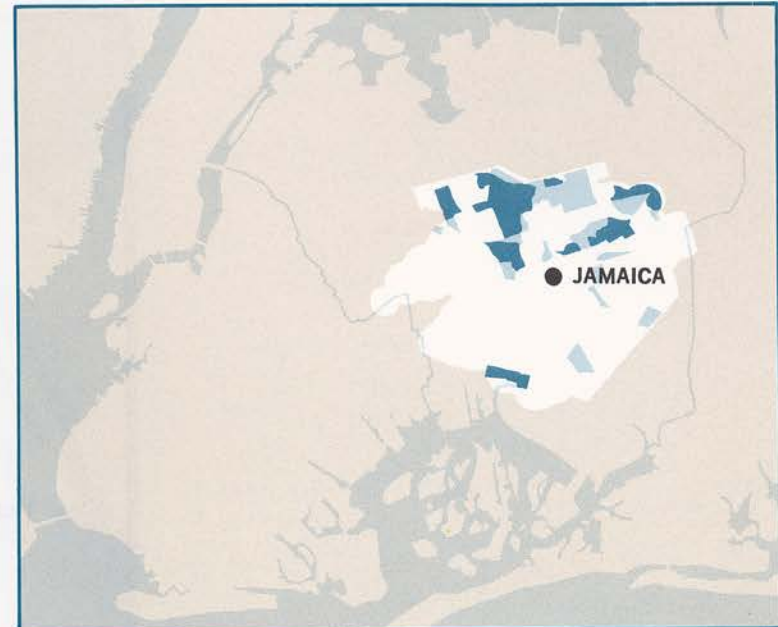
Before 1960, much of the residential construction (map at right) in Jamaica's primary zone of influence occurred north of Jamaica Center. But since 1960, about 8,000 dwelling units have been built in the southern area. The planned subway extension to the south and the City's proposed urban renewal program could stimulate more new housing in selected areas there.



Map 20

MEDIAN INCOMES

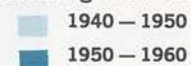
Census tracts in Jamaica's primary zone of influence with median family incomes:



Map 21

RESIDENTIAL CONSTRUCTION

Census tracts in Jamaica's primary zone of influence with over 50% of the dwelling units constructed between:

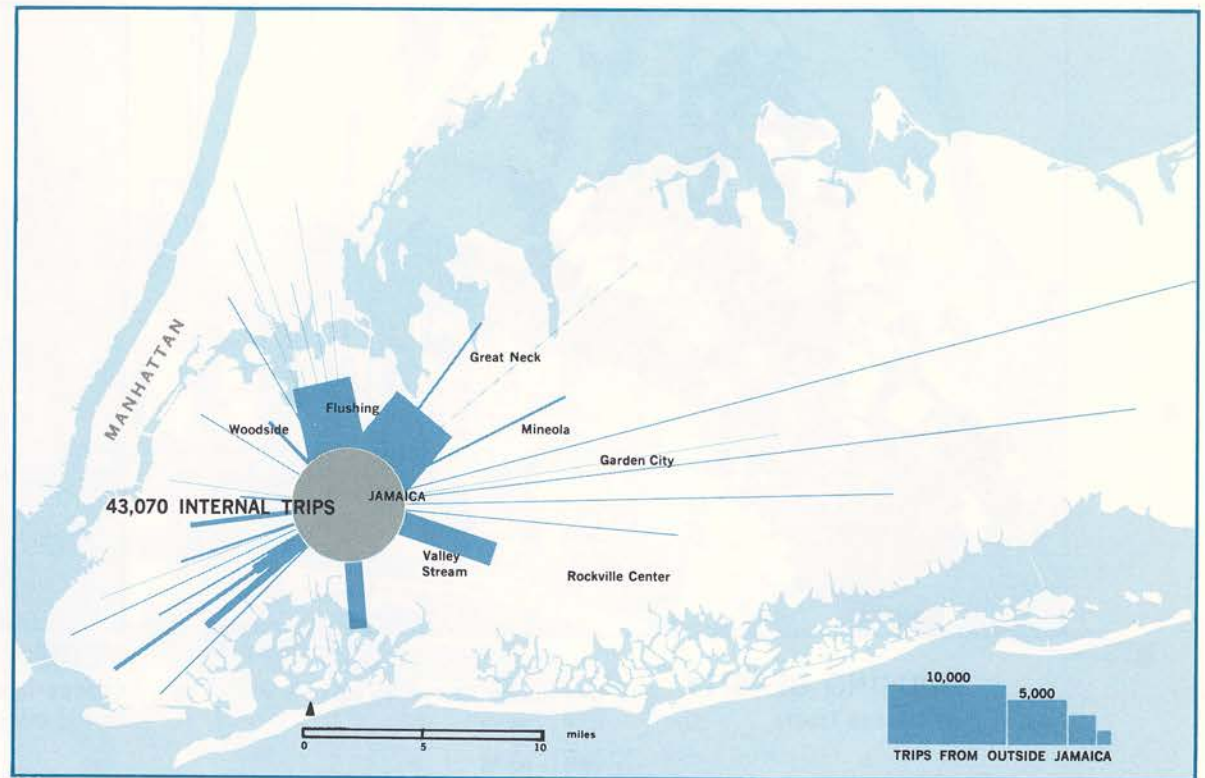


9. Daily work trips to Jamaica by income and origin, 1960*

The pattern of peak-hour movements by workers into the Jamaica area indicates that most, regardless of income, generally come from the northeast or southeast. These areas are primarily served by buses at present. Comparatively few workers now come from the west — where Manhattan's attraction is strong — or from central Long Island. These areas have good rail and subway access to Jamaica. As more office jobs are located in Jamaica, as population increases and as the Long Island Rail Road service is improved, more workers can be expected to commute from these areas east and west of Jamaica.

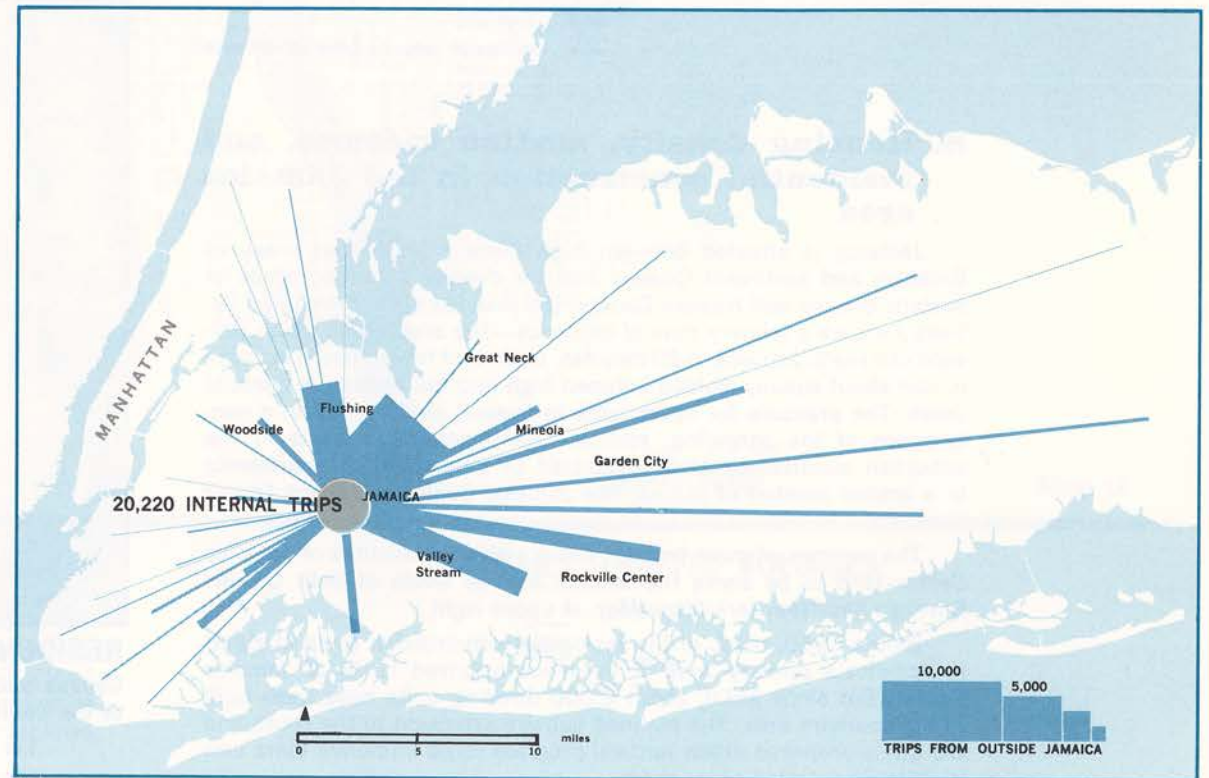
Note that most persons now working in Jamaica earn less than \$10,000 a year, and that shorter trips generally correspond to lower incomes. Internal trips, indicated on the maps by a circle, are those which begin within about 2 miles of the Jamaica business district.

TRIPS BY WORKERS EARNING LESS THAN \$5,000 ANNUALLY



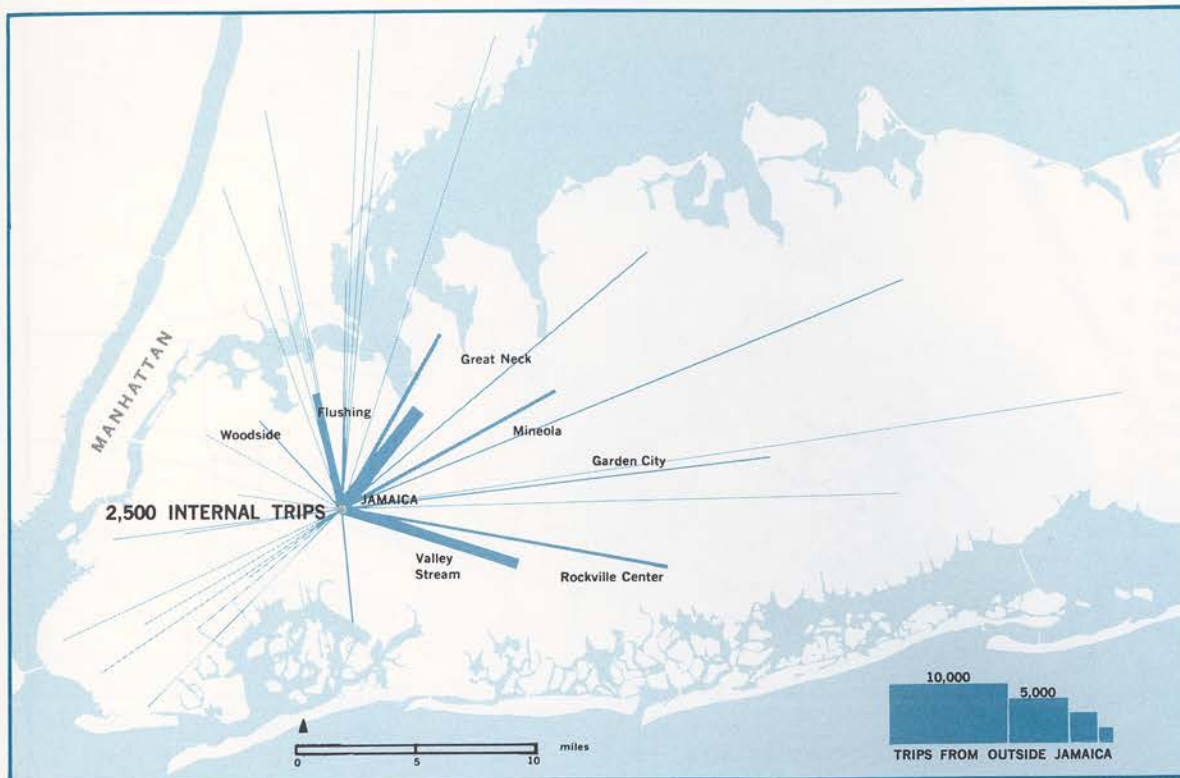
Map 22

TRIPS BY WORKERS EARNING \$5,000 TO \$10,000 ANNUALLY

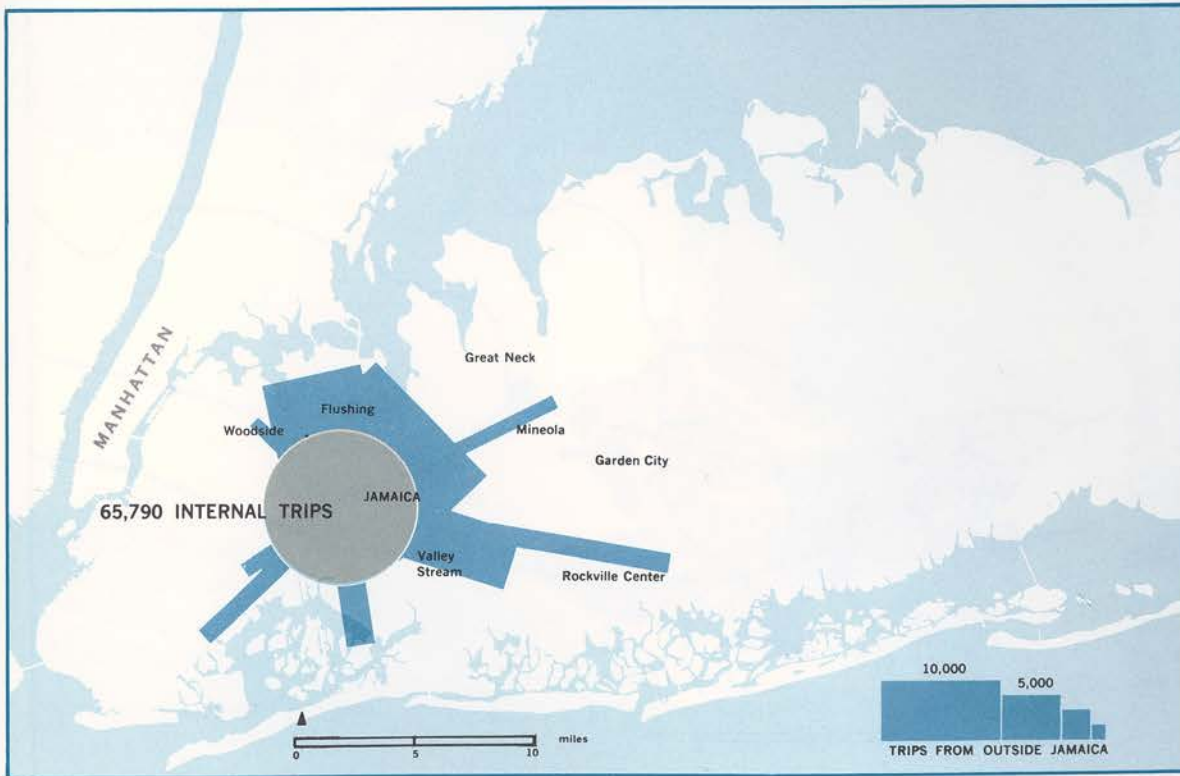


Map 23

*Trips totaling less than 10 from a given locale are excluded.



Map 24



Map 25

TRIPS BY WORKERS EARNING MORE THAN \$10,000 ANNUALLY

TOTAL DAILY WORK TRIPS All Income Groups

Streams of less than 100 trips are not shown here.

ZONES OF INFLUENCE: AUTO OR BUS

Areas within 20 minutes (door-to-door) of local "downtowns" by auto at peak hour.

Travel time by bus would be very similar within these areas.

— Outline of Jamaica Zone of Influence

10. 20-minute zones of influence by mode

Some of Jamaica's facilities will be most attractive and convenient to persons living within a 20-minute trip of the Center. Many housewives, for example, who are capable and who wish to work, can do so only if a job is available a short distance from home. There are over 100,000 women between the ages of 35 and 65 who live within 20 minutes of Jamaica Center via bus, automobile, subway or railroad. Some of these women already work and some would not work, but such a large group is a significant potential labor pool for clerical, sales and other jobs which a Jamaica Center would provide.

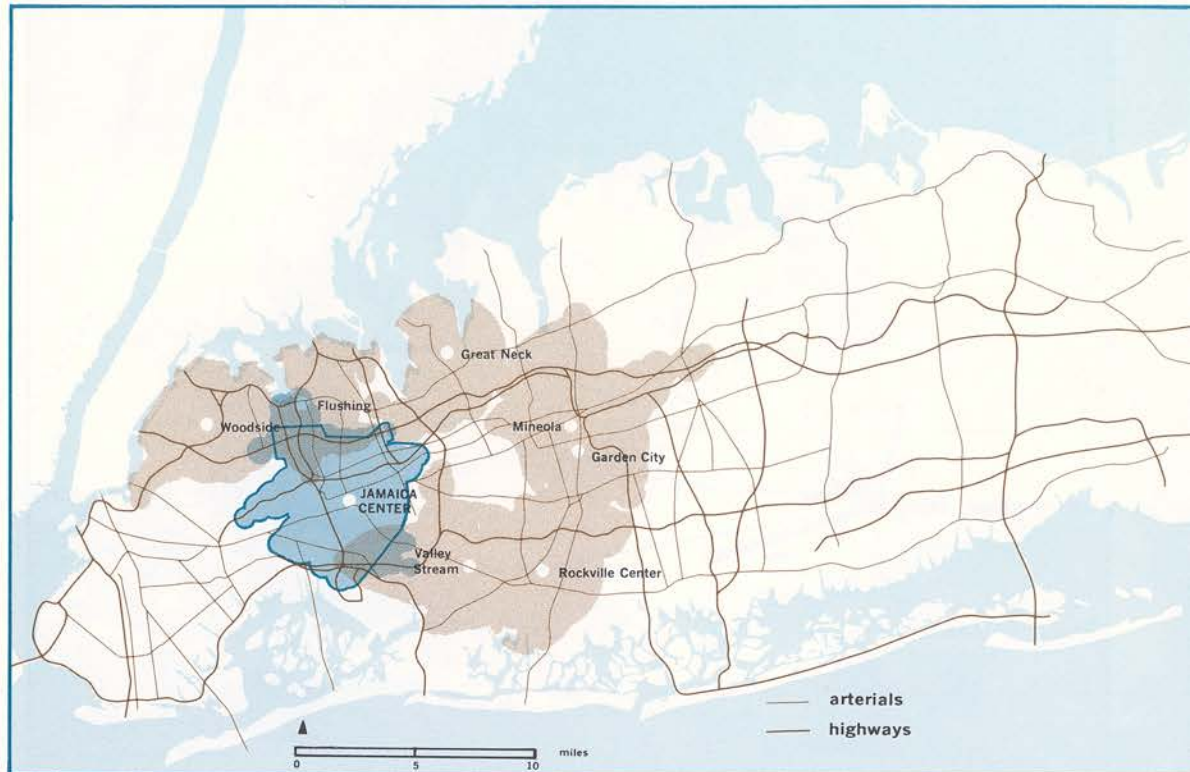
Jamaica's "zone of influence," as defined by the area within which persons can reach Jamaica in twenty minutes by auto or bus (above) or by railroad (below). This zone of influence is compared to similar zones for seven smaller business districts in Queens and Nassau County (tan). The blue-shaded area also represents the potential labor market from which Jamaica Center is likely to draw women employees. The dark blue line around Jamaica in both maps cuts in half that part of the zone of influence that overlaps between Jamaica and other business districts.

ZONES OF INFLUENCE: RAILROAD

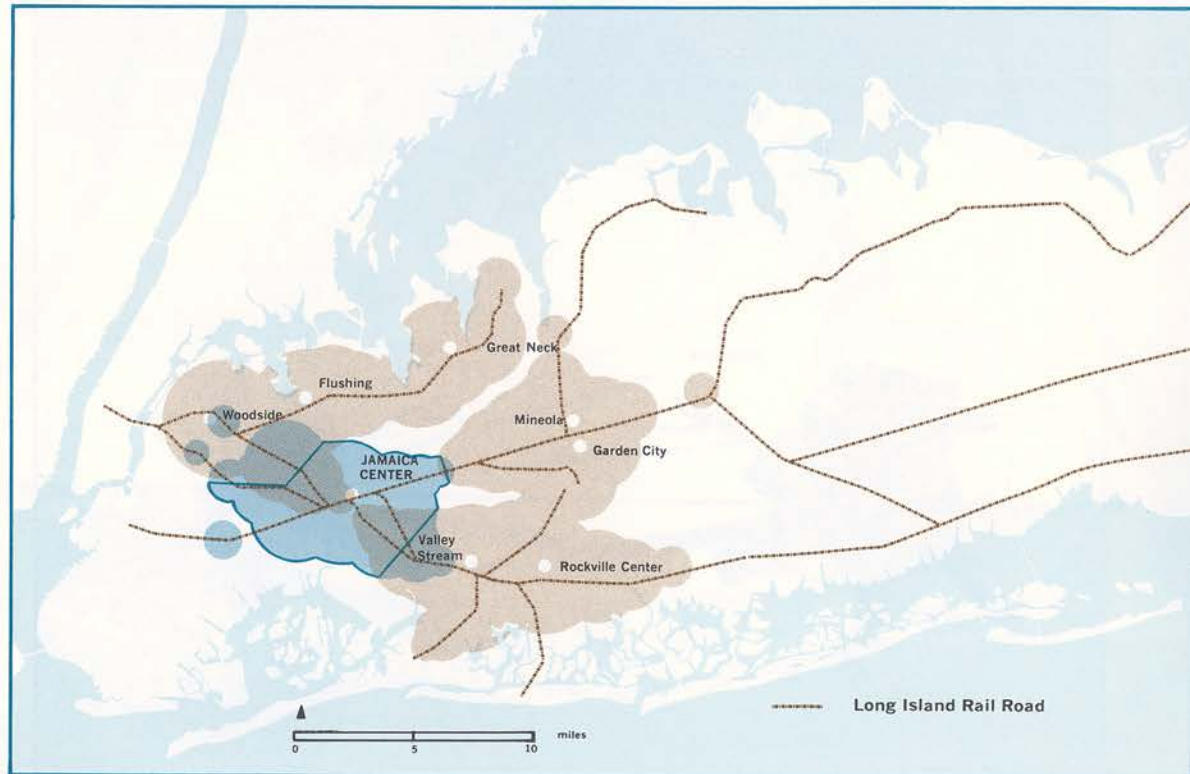
Areas within 20 minutes (door-to-door) of local "downtowns" by rail at peak hour.

Twenty-minute travel time to Jamaica by subway is almost completely contained within the blue area.

— Outline of Jamaica Zone of Influence



Map 26



Map 27

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