

status report, march 1968

MIAMI
URBAN
AREA
TRANSPORTATION
STUDY

Metropolitan Dade County, Florida

transportation

PROGRESS REPORT AND PRELIMINARY PROPOSALS

of the

MIAMI URBAN AREA TRANSPORTATION STUDY

A Staff Report to the

DADE COUNTY BOARD OF COUNTY COMMISSIONERS

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MARCH 1968

MIAMI URBAN AREA TRANSIT STUDY

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Progress and Preliminary Proposals
of the
MIAMI URBAN AREA TRANSPORTATION STUDY

A Staff Report to the
Dade County Board of County Commissioners

March, 1968

This is the second report to the community on the progress of the Miami Urban Area Transportation Study. A year ago the findings of the survey of present and projected future overall travel demands for each major transportation mode were summarized. In the meantime the study has advanced to the extent that preliminary recommendations have been developed on many elements and major progress has been made on the remaining. The projected completion date of Summer 1968 that was indicated at the first reporting session still remains the target date for total study completion. In the meantime, as is indicated in this report, portions of the plan implementation and continuing program elements are already being realized.

Before summarizing the proposals and progress on each of the major MUATS elements, a review of the study background and design are in order.

BACKGROUND

The Federal Highway Act of 1962 emphasized the need for improved transportation planning and set the stage for MUATS with the requirement that:

After July 1, 1965, the Secretary of Commerce (now the Secretary of Department of Transportation) shall not approve any program of projects in any urban area of more than fifty thousand population unless he finds that such projects are based on a continuing, comprehensive transportation planning process carried on in cooperation by states and local communities.

A "Memorandum of Agreement" setting forth scope, organization and division of responsibilities for the MUATS was approved jointly by the State Road Department and Board of County Commissioners in December, 1963. This agreement framed MUATS as a comprehensive approach to transportation planning. Within the study, consideration is given to all major components of present and future transportation systems including:

- . Streets and Highways
- . Mass Transit
- . Terminal Facilities
- . Airports
- . Waterports and Waterways

The interrelationships between these facilities and community development (land use) patterns are given full recognition in the study.

The State Road Department (SRD) is largely responsible for the streets and highways elements; Dade County for the rest. The SRD Engineer for Traffic and Planning and the Dade County Planning Director are co-study directors for MUATS. A

technical advisory committee (TAC) comprised of all participating departments, authorities, and agencies meet regularly to coordinate the study; a policy committee comprised of the County Manager and the State Road Board Member from this district decide policy matters.

Several consultants are utilized in the study. Mel Conner and Associates, Inc. (Tallahassee, Florida) is under contract with the SRD to do most of their work on the streets and highways portion of the study. Although Dade County is accomplishing most of its assigned work using its own staff, Alan M. Voorhees and Associates, Inc. (Washington, D. C.) is under contract to provide general consulting services to the county on the entire study, and Simpson and Curtin (Philadelphia, Pennsylvania) is under contract with the county to formulate the Mass Transit Master Plan.

The SRD began work on data collecting phase in February, 1964; Dade County began intensive work in February, 1965, upon receipt of its three-year Federal grant. The target date for completion of this study is Summer, 1968. Updating and refinements to the MUATS is a continuing planning process.

The total study cost is approximately 1½ million dollars; nearly 75% financed with Federal matching funds from the U. S. Bureau of Public Roads and the U. S. Department of Housing and Urban Development (formerly HHFA); remaining 25% from SRD and Dade County. The county's share of matching funds (\$145,000 spread over three years) is comprised entirely from salaries of county personnel working on this study (largely from the Planning Department).

Similar studies are underway concurrently in Broward County, Palm Beach County and in seven other urban areas.

STUDY DESIGN

One of the initial phases of MUATS was the presentation of the study design or work program. In keeping with the Federal requirements and state and local objectives, the work program was structured to provide for a study that was comprehensive in consideration of all transportation and land use planning elements, cooperative in its involvement of both Federal, state and county agencies, and continuing in review and updating. Within five major stages of MUATS development — collection of data, analysis and development of goals and standards, plan formulation and testing, plan review and adoption, and continuing programming — four basic types of work efforts and studies were identified:

1. Foundation Studies

- a. Economic Factors
- b. Population
- c. Land Use
- d. Social Factors
- e. Goals, Principles, and Standards
- f. Laws and Ordinances

2. Plan Element Studies

- a. Streets and Highways
- b. Public Transit
- c. Terminal Facilities
- d. Airports
- e. Waterports and Waterways

3. Plan Implementation

4. Continuing Program

The following sections of this report summarize the preliminary conclusions and recommendations and the status of each of these components.

POPULATION AND ECONOMIC FACTORS

In examining present and projecting future transportation patterns and needs, the basic premise of MUATS is that Dade's travel patterns and volumes are a function of the manner in which different human activities are distributed throughout the county. Thus present (1964) travel patterns and economic and social activity patterns are compared (as covered in detail in the last report to the community in 1967) and projections of future patterns of activity -- where people live, work, shop and attend school -- are converted into future travel demands utilizing the interrelationship established previously. In the computer "testing" of future transportation systems, these demands are assigned to proposed highway and transit networks to measure their ability to serve the projected need. Although the socio-economic activity and travel patterns relationship is used primarily to develop projections of future travel demands, it can also be used in reverse to check the general level of activity that a given transportation can support. Thus the process of developing and reviewing the socio-economic data used in projecting future travel is a very important part of the transportation study process. The results of this phase of MUATS have been very revealing.

Population

Initially, the 1985 population projections developed as a part of the 1960 Dade County Economic Base Study were used to project 1985 travel demands. This population was distributed to the 550 traffic zones strictly in accordance with the General Land Use Master Plan recently adopted by the county. An analysis of building permits and school statistics led to estimates of population and housing by census tract for both 1963 and 1966. At the same time, annual estimates of the total county population were being made for a population in-migration study.

Through the process of projecting 1985 travel demands and testing 1985 highway and transit networks, it became apparent that some of the basic assumptions upon which the original forecasts were based needed modification. For example, the original 1985 population estimate for Dade County was 2,433,000. This estimate stemmed from the assumptions that annual in-migration would average 35,000 per year over the forecast period while natural increase, the excess of births over deaths, would be equivalent to 13.8 per thousand population. A review of actual experience of the 1960's to date indicated that in-migration was averaging only slightly in excess of 25,000 while natural increase had declined drastically as a result of lower birth rates to 5.2 per thousand in 1967.

It was decided therefore to construct revised projections of overall 1985 population based on the new information. For purposes of these projections in-migration was set at 30,000 per year through 1970 increasing to 35,000 per year in the 1980's. More drastic cutbacks were made in the rate of natural increase from 13.8 per thousand to 5 per thousand for the remainder of the 1960's and increasing to 8 per thousand in the 1980's. Recognizing that demographers have had a strikingly poor record for forecasting future birth rates it was nevertheless felt justified to use increasing levels of natural increase for projection purposes because of the increasing proportions of women of child-bearing age

that will be present during the next two decades as the World War II "baby boom" moves through the population age strata.

The following table compares the levels of projected population according to both the original and revised estimates:

<u>Year</u>	<u>Original Forecast</u>	<u>Revised Forecast</u>
1965	1,154,000	1,114,000
1970	1,467,000	1,290,000
1975	1,757,000	1,486,000
1980	2,079,000	1,706,000
1985	2,433,000	1,955,000

Population Distribution

The review of the experiences of the 1960's also required that some changes be made in the way the 1985 population was originally distributed in connection with formulation of the General Land Use Master Plan.

The 1960's have witnessed a remarkable change in growth patterns. During the immediate post-war period from three to four times more single-family homes than apartment units were constructed. Much of this low density construction took place in the large outlying subdivisions. As a result, the urbanized area expanded almost as rapidly as did the urbanized population. The situation has virtually reversed during the past few years with as much as 80% of new residential units going to apartments. This has meant that the urbanized area has expanded relatively little in recent years considering that almost 300,000 persons have been added to the population. The General Land Use Master Plan anticipated a degree of reconcentration of the metropolitan area, but not as much as recent trends have indicated. Population distribution was readjusted, based on these trends. The bulk of the reduction in overall estimates was taken from the outlying areas -- particularly the South Dade core area where recent growth has fallen short of previous estimates. This does not mean that the ultimate growth potential of South Dade is questioned, rather that much of this growth can be expected to be postponed beyond the 1985 target date.

Auto Ownership

Quite logically, the number of trips generated in a given area is highly sensitive to the number of autos per typical family. Thus, the family without a car can be expected to take fewer trips per day, dependent as they are on public transit, than the family with a car. The car ownership forecasts are therefore most important not only in projecting highway demands but also in assessing the needs for transit. The forecasts developed for MUATS were derived essentially from two benchmark sources -- the 1960 Census and the 1964 Household Survey taken in connection with the transportation study. In 1964, 24.8% of the households did not own automobiles, 49.4% owned one car and 25.8% owned two or more cars. In 1985 Dade County will have 887,521 autos. In 1964 the total was 381,227. Increase will represent 233%.

SOCIAL FACTORS

A community attitude questionnaire was left with the 15,000 respondents to the Household Survey. About one-third mailed in their responses. The purpose of the survey was to determine what the citizens of the county felt about various qualities of the Miami Community so that planning might better consider these attitudes when developing its policies.

Some of the more important and interesting findings of the study were:

- Respondents rated the general appearance of the county, its entertainment and recreational facilities, and the educational system highest;
- Job opportunities, and the transit service ranked the lowest;
- Cultural facilities and the highway system were in the middle.
- Residents were most satisfied with the distance they had to go to shop and least satisfied with the distance they had to go to get to a bus line.
- When choosing their neighborhood, respondents were most interested in its general appearance, type of development and quality of shopping. Quality of education and closeness to job were of moderate importance while closeness to friends, family and recreational facilities were of least importance.
- Eighty-five percent of the respondents indicated a preference for single-family housing. This is remarkable since more than two-thirds of all residential construction is now going into apartments.
- More people would like to live in South Dade than anywhere else in the county but more people in South Dade are considering moving than anywhere else.
- People spent more of their leisure time watching television than any other single activity. Activities with children, reading and educational pursuits rated closely behind, however while pleasure driving commanded more time than did all forms of sports.

LAWS AND ORDINANCES

The community's transportation system must operate in an extensive framework of laws, ordinances and regulations. One of the major background studies of MUATS is to determine what studies and ordinances exist at the federal, state and local level with respect to all relevant aspects of transportation and then, determine what new statutes are needed at the various levels of government to accomplish the objectives of the transportation plan.

The basic inventory of laws and statutes has been completed. Covered in this process were: (1) Florida Constitution; (2) Florida Statutes; (3) Dade County Home Rule Charter; (4) Port Authority legislation; (5) Code of Dade County Ordinance; and (6) Federal legislation and programs.

The study of the need for additional laws and statutes or changes in existing ones is now in process but can not be completed until a final transportation plan identifies all of the transportation needs. However, several basic requirements have already been identified. These include:

1. Continued review of the Florida gasoline tax laws to provide equitable distribution of state road funds.
2. Reevaluation of the Dade County ordinances that require the operation and maintenance of the metropolitan transit system on a self-liquidating and self-sustaining basis must be reevaluated if major improvements to the existing bus or development of rapid transit system is to be implemented.
3. Establishment of the full legal basis required for Dade County to construct and operate its own expressway system.

HIGHWAY PLAN

Substantial progress has been made on the development of the MUATS Highway Plan component. To date five computer "tests" or analyses of the highway systems have been completed. These tests, and their results, were:

1. The existing highway system operating with 1964 travel demands. In this initial test the 1964 highway network, operating in conjunction with the 1964 bus system, was loaded with the 1964 travel demands for computer program testing and calibration.
2. A 1970 highway system carrying 1985 travel demands. The existing 1964 highway network and the facilities presently committed for construction, were complemented by a 1970 bus system, loaded with the travel demands projected for a 1985 population of 2.5 million as forecast in the county's General Land Use Master Plan. Extensive overloading of the facilities was observed.
3. A future highway system serving 1985 travel demands. A future highway network (Dade County's Approved Major Thoroughfare Plan), operating in conjunction with a projected 1985 bus transit system, was loaded with the forecast 1985 travel demands. The highway system was found incapable of accommodating the projected traffic. The most critical areas of deficiency were the north-south corridors in the northern part of the county, the east-west corridors served by 79 and 36 Streets, and the Dixie Highway-South Dade Expressway corridors, (the north-south expressway facilities were determined to need an additional 18 expressway lanes to carry the indicated volumes). Totally, 43 percent of the streets, arterials and expressways were assigned volumes in excess of their capacity.
4. A future highway system serving 1985 travel demands, supplemented by a rapid transit system. The same 1985 highway network previously tested was reassigned the forecast 1985 travel demand. However, the highway system was complemented this time with a combination bus-rapid transit network. Although the level of transit ridership increased by about two-thirds, the impact on the highway demands and overloadings was negligible. (However, the procedures used in estimated future transit ridership were at this time deemed in need of refinement before the transit projection considered conclusive.)
5. An expanded future highway system carrying reduced 1985 travel demands. Based on the last test, highway improvements were added including new extensions of the Palmetto and West Dade Expressways, new 79 Street and F.E.C. Expressways, and Red Road and Bird Road widenings (see map). Also, as a result of a re-examination of the original future population forecasts, a revision of the 1985 projection from 2.5 million to approximately 2.0 was used in developing future travel demand. The resultant test indicated that the expanded highway network, operating in

conjunction with a 1985 bus system, could generally handle the revised demand. Some overloadings occurred in the A-1-A, U. S. 1, I-95, LeJeune-Douglas, Palmetto, and South Dixie corridors. One overall indication of the adequacy of this revised network is seen in the fact that only 23 percent of the thoroughfares were operating in excess of their capacity.

Alternatives

Two basic alternatives can be developed and tested in the final refinement of the 1985 highway system. These alternatives are:

1. An expanded highway system utilizing additional arterial improvements to accommodate remaining overloadings.
2. A largely unchanged highway system which relies more heavily on rapid transit lines to absorb excess travel demands.

Both of these alternatives will probably be pursued in the remaining phases.

Preliminary Conclusions and Recommendations

With a tested highway network that basically seems to accommodate 1985 travel demands, it is recommended that accelerated effort be made to develop an acceptable interim 1985 plan that can permit work to move forward on any local highway projects that may have been delayed until such a plan was developed.

Work Remaining

One or two more tests will be required to develop an interim 1985 plan, and about the same number for development of a 1975 plan. After that, peak hour analyses of the networks can be performed and a financial plan developed.

TRANSIT PLAN

A 67-mile rapid transit network has been developed to meet the needs of present and prospective transit riders in Dade County. The volume of movement along Miami Beach and trans-bay to downtown Miami and Miami International Airport is already of sufficient magnitude to justify construction of a 13.3 mile line along Miami Beach estimated to cost 147 million dollars and a 10.8 mile connection to downtown and the airport at a cost of 146 million dollars.

This Miami Beach link would serve the more than 65,000 transit riders a day who currently travel to Beach points and divert a portion of the 383,000 people who are making the trip by auto. A "medium capacity" rubber-tired rapid transit system can solve congestion problems and at the same time be aesthetically compatible with the Beach environment.

The system has the capability of providing personalized airport service by marking train modules for specific airlines and flights -- check in and baggage handling would be accomplished at rapid transit terminals and the traveler has "made his flight" at that point with no need to be concerned about baggage handling.

The other major corridor for serious consideration of upgraded transit services is along the FEC Railroad right-of-way from Homestead to the north County line. This 43 mile route has been considered for several levels of "rapid" service. An elevated rapid transit system could be constructed in two steps -- 219 million dollars for the 21 miles from 163rd Street to Kendall Drive and 234 million dollars for the remaining 22 miles to Homestead and the north County line totaling 453 million. This same corridor has been considered for elevated "rapid busway" operation at a cost of 35 million dollars for the first section and 69 million dollars for the extensions -- 104 million dollars total. Final judgment on the potential for ultimate development of this corridor will have to await completion of analysis being conducted by the State Road Department. However, the corridor provides an immediate opportunity to provide improved service and gain operating experience which should not be overlooked.

The recent Rail-bus demonstration has shown the potential value of this route for traffic relief. A dual experiment to assess the relative passenger acceptance and operating expense differences between Rail-bus and "busway" services has been suggested. FEC right-of-way south of downtown could be immediately upgraded to accommodate a Rail-bus system of routes. A portion of the right-of-way north of downtown could be paved at grade for exclusive bus use -- controlled testing during operation of these two services would provide information not only for Miami but also for many other cities considering these forms of transit improvement.

The four major corridors identified in this analysis are the only areas of the County with sufficient present or prospective volumes to warrant consideration of grade-separated transit. Even with an anticipated population of nearly 2 million people, densities will not approach the level required to support rapid transit in outlying sections.

The next step towards implementation of the rapid transit program is the completion of detailed engineering and economic feasibility studies of each of these corridors. The justification for the Miami Beach route is readily apparent, but the other corridors require more careful scrutiny before funds can be expended for capital improvements. Feasibility studies will follow the completion of MUATS planning studies.

TERMINALS PLAN

Miami Urban Area Transportation Study places major emphasis on the provision of adequate streets and highways. However, no matter how effective these channels of movement are, unless adequate terminal facilities are provided, the movement of goods and people will suffer. Thus, one of the important elements of the overall study is the provision of truck, rail and bus terminal facilities. The State Road Department is studying the need for parking facilities.

Goals and Objectives

The overall goal of the terminals component of MUATS is to provide a plan for the provision of an adequate system of present and future truck, rail, and bus terminal facilities. Adequacy is defined in terms of the location, design and operation of terminal facilities to maximize (1) health, safety and aesthetics, (2) accessibility and convenience, and (3) land use compatibility, and (4) application of technological innovations.

Analysis

Truck Terminals. A basic source of data for the truck terminal study was a sample survey of truck activity gathered as part of the 1964 trip origin and destination survey. Based on a ten per cent sample of all trucks registered in Dade County with the State Motor Vehicle Commission and a State Road Department inventory of governmental operated trucks, this study indicated that 161,000 truck trips were made within the metropolitan area on an average day (equal to about nine per cent of all vehicle trips). About ten per cent of the truck trips were designated as external, i.e., across the study area boundary. Pickup and panel trucks accounted for 48 per cent of the total truck trips; larger dual-axle trucks, 48 per cent; and three-axle trucks and tractor-trailers, only four per cent. The analysis of truck trip distribution patterns revealed that virtually all parts of the study area were subject to some type of truck traffic in an average day. An analysis of trip purpose revealed that nearly 40 per cent of the total truck trips were in conjunction with wholesaling and retailing business; twice the next highest category of purpose. Also, it was found that 82 per cent of the tractor-trailer trips were made by trucks used by transportation, communications, public utilities and wholesale and retail trade industries.

The analysis of truck trip data revealed that truck trips comprise a relatively small portion of the total trips in the Dade study area. Since they account for nearly one-half of the truck trips the heavy two-axle trucks were deemed to be of particular interest to this study. In addition, with a lack of truck trip concentrations evidenced, it was concluded that the focus of the study should be on point of trip origin and destination -- the terminals and unloading facilities.

Primary consideration has been given to those terminals used by common carriers of general commodities. Common carrier terminals are especially important to Dade County's many small manufacturing firms, which characteristically are dependent on these truck lines which will capably and willingly handle small shipments as well as truckload shipments. This dependence is reinforced by the general outward movement of industrial plants, which is itself a result of the development of the trucking industry. Another significant characteristic of Dade County that has had a major impact on common carrier operations is the "end-of-the-line" status that reduces the need for transfer or interlining activities between truck lines, and subsequently the number and size of local terminals. Virtually all of Dade's

common carrier terminals are located in the northern half of the county. Several factors appear to contribute to this distribution pattern including: (1) an ICC freight rate differential unfavorable to the southern portion of the county, (2) a concentration of industry in northern Dade, (3) proximity to heart of Dade-Broward economic area, (4) better northern and western expressway accessibility, (5) lower land costs, and (6) the industry-wide trend toward peripheral location.

There are problems with respect to location, design and operations that most terminals experience in some degree. First, trucks often find it difficult to enter a relatively fast-flowing stream of automobile traffic on high-volume arterials. This problem is augmented if a terminal is located right on an arterial. Second, space allotted for automobile parking at terminals is in most cases inadequate. Third, for most terminals, cargo volumes (and hence revenues) do not appear to be high enough to permit installation and use of modern materials-handling equipment.

Although initially MUATS projected a 1985 increase in trucking activity of approximately 250 per cent over the present level, subsequent analysis has revealed a number of uncertainties in such a projection. These imponderables are the result of two potential types of changes in both the trucking industry and other modes of cargo transport; technological change and institutional change. Technological change could include the development of more efficient trucking vehicles, additional improvements in containerization and combination truck-rail and truck-boat operations, improvements in competing modes such as air freight and increased usage of computers for truck rail, and air traffic control. Significant institutional changes would include sweeping adjustments in Federal ICC regulation and State weight limitations. Also State and Federal highway building policies and programs vitally affect trucking activities. The degree of uncertainty related to this "industry in transition" suggests that careful consideration be given to proposals relevant to trucking terminals.

Bus Terminals. Dade County is served by two competing interstate bus companies - Greyhound and Trailways. Each day an average of 2,500 persons enter and leave the central urban area on the buses of these two interstate lines. Principally, buses serve short trip (less than 200 miles) and low-income customers, a market they are uniquely suited to serve.

A growing portion of the total revenue of these common carriers results from increased package express. It is estimated that present package express operations account for nearly 15 per cent of bus line revenues.

In planning for a future Dade County transportation system, it can be expected that both passenger and package express operations will continue to increase at a pace that will require careful consideration be given to this significant component. Primary consideration should be given bus terminal facilities. At present the two lines operate two main terminals and seven substations. Both of the main terminals are downtown in an area proposed for future revitalization and in locations remote from access to the community's expressway system.

Rail Terminals. Dade County is served by two competing railroad companies - the Florida East Coast and the newly merged Seaboard Coast Line Railroad. The FEC is active in freight activity only while the Seaboard Coast Line is maintaining a freight and passenger service. The recent increase in piggyback trailer hauling and the general emphasis on industrialization of the county has given the railroad an increased importance in the total transportation system. The FEC operates four active freight stations while the Seaboard Coast Line operates from five active freight and passenger stations.

Alternative Proposals

Truck Terminals. In an effort to improve the efficiency, safety, and compatibility of Dade truck terminals, present and future, several plan alternatives have been developed. These include:

1. Continuation of present policy of permitting developers and operators to locate truck terminals within industrial zones.
2. Change zoning regulations to provide specific development standards for future truck terminals.
3. Create special zoning districts for common carrier truck terminals.
4. Set aside or purchase public land for common carrier terminals for sale or lease to private terminal developers or for construction of publically owned joint or union terminals.
5. Promote pooling of pick-up-and-delivery operations of private firms.
6. Encourage development of measures for relieving congestion and delays in pick-up-and-delivery operations at customers' loading docks.

Bus Terminals. To effect the optimum relationship of intercity bus terminals to the local highway and intracity transit systems, two basic plan alternatives have been considered:

1. Continue with the present condition until downtown revitalization progresses to the point that the terminal operations can be encouraged to develop a new, consolidated terminal at a more desirable location.
2. Seek to include a consolidated terminal within any publically owned and operated multi-mode transportation center developed as part of the downtown redevelopment.

Rail Terminals. In the interest of improving the rail passenger and freight terminal components of the community's transportation system, several basic alternatives are under consideration. These include:

1. Continuation of present condition of principally separate freight and passenger facilities by each railroad.
2. Encourage concentration of freight terminal expansion in outlying locations in close coordination with new industrial development and freight terminal development of other transportation modes.

Preliminary Conclusions and Recommendations

Truck Terminals. In the current evaluation of these alternatives none has been found to be clearly preferable to the others. The first two alternatives call for little or no change and correspondingly provide little potential advancement in meeting the overall objectives. Alternatives 3, 4, 5, and 6 call for major actions and hold a potential for contributing significantly to most or all of the stated objectives of the study. Some alternatives call for individual and coordinated private actions, others for strong public participation.

Bus Terminals. As downtown redevelopment provides an opportunity for new locations of central area interstate bus terminals, every effort should be made to consolidate these operations into one facility which provides ready access to both the expressway system and to the local transit system. Expressway accessibility is required to maintain favorable intercity schedules in the face of growing traffic congestion, and the transit linkages to provide economic means of intracity travel to and from the terminal. The provision of such facilities by public or private means within a contemplated central multi-mode transportation center should be given careful consideration.

Rail Terminals. Preliminary conclusions and recommendations are still under development.

Remaining Work

Before final recommendation with respect to truck, bus and rail terminals can be developed, all major considerations must be evaluated with industry representatives. The financial dimensions of these recommendations must be prepared and analyzed in the preparation of the overall transportation plan.

AIRPORTS PLAN

The future growth potential of the south Florida region will continue to be closely related to the availability of convenient and efficient air transportation. Dade County, as the hub of that region, will continue to generate the bulk of the local demand for air travel. These companion trends dictate that air transportation facilities be given major consideration in the MUATS process.

Goals and Objectives

Within the overall goal of providing better air transportation, as a part of a well-balanced transportation system for Metropolitan Dade County, the following objectives have been identified:

1. Development of convenient airport accessibility. Traveling time to the airport should be limited to a maximum of 30 minutes. The airport should be linked to the primary highway network and to the mass rapid transit system. At the same time, land use close to the airport should be conducive to the most efficient and effective operation of both ground and air transportation.
2. Provision of efficient use of air space. Use of air space by air transportation should be aimed at achieving the most efficient and safe service to the metropolitan community. Air space use should be allocated to those aviation activities which offer the greatest potential net gains to the community. Benefits from air space use should be measured by taking into full consideration both market and social factors.
3. Encouraging use of new technology. Airport designs and operations must promote the use of both short and long haul aircraft while maintaining the highest standards of safety and convenience.
4. Enhancing the quality of the urban environment. Airport planning and development should be in keeping with objectives of Dade County's General Land Use Master Plan. Environmental compatibility should be achieved beyond airport boundaries.

Analysis

Potential developments in air transport which will have a direct bearing on Dade County are:

1. Substantial improvement in helicopter performance, the short take-off and landing (STOL) transport, and the vertical take-off and landing (VTOL) transports.
2. Evolution of the subsonic jet transport types, toward larger models, i.e., the Boeing 747, Airbus DC 10, smaller models, i.e., Boeing 737; Fairchild FH 227, and toward a point where noise control and shorter runway length requirements will enable the use of smaller airports,

close to the urban center.

3. A rapid increase in the use of general aviation for transportation as well as the increase in number of general aviation aircrafts. Most manufacturers are improving technical standards for radio communication, radar, turbine power, pressurized cabins, etc. These improvements in aircraft design and construction will tend to increase the demand for general aviation facilities.

MUATS analyses and projections indicate that the total number of air passengers in 1985 will be 35,096,000. The maximum projection for this period is 38.6 million while the minimum is 31.0 million. In 1966 the total passenger movement was 7,107,645 million. An analysis of the capability and capacity of the Miami International Airport indicates that the facility will not be able to serve all the air traffic projected for 1985.

The introduction of new gigantic jets will change the present air traffic characteristics. Fewer aircraft will move more people. As an example, projections for air traffic in MIA in terms of SST and jumbo jets (Boeing 747) are: For the Boeing 747 - 1976 (FAA) 28 passenger departures and 7 cargo departures; 1976 (Boeing) 28 passenger departures and 7 cargo departures. For the SST - 1976, both projections are 10 departures a day in passenger flights.

Alternatives

It is possible to provide air transportation facilities to a large area like south Florida following two approaches: (1) to develop a big regional airport that will concentrate the bulk of the traffic in one spot; or, (2) to design a system of several airports distributed throughout the region, but conveniently interconnected with expressways and rapid transit.

In the past the idea of the one single facility, the regional airport, has been very popular. However, airports are considered not just the terminals for air transportation, but the concourse for two transportation systems: ground and air. Without dramatic improvements in highspeed ground transportation the most efficient solution from this point of view is the airport system which shortens surface travel distances and permits economic use of surface transportation facilities.

The so-called "airport crisis" that is now faced by the U. S. was summarized by President Johnson in his March 2, 1966 message on transportation: "The United States Transportation System is not good enough when it produces sleek and efficient jet aircraft - and yet cannot move passengers to and from airports in the time it takes to fly hundreds of miles.... "We spend millions for fast jet aircraft - but little on the travelers' problem getting to and from the airport."

Preliminary Conclusions and Recommendations

1. Develop a multi-airport commercial aviation system, using Miami International Airport as the center, and a new supplemental airport south of Homestead Air Force Base as a secondary facility.
2. Open Opa-locka and the new Tamiami Airports to both commercial short haul and general aviation activities.

3. Connect this multi-airport system with both rapid transit lines and major expressways.
4. Build a satellite passenger terminal in Miami Beach and connect it to the airport system by rapid transit or by vertical take-off aircraft.
5. Construct a system of secondary backup airports for general aviation.
6. Conduct a technical research study of air transportation and related programs.

The recent decision of the Dade County Port Authority, locating a New Transition Training Supplemental Airport in the western part of Dade County and eastern part of Monroe County is directed toward the solution of a problem that the Planning Department recognizes - the potential saturation of Miami International Airport.

The development of the Everglades Airport as a training facility is compatible with the MUATS recommendations. However, the development of a second major air center in the metropolitan area should relate to the surface transportation and land development patterns in a manner that is efficient and favorable for Dade County as a whole.

The south Dade location for a major new commercial airport presents advantages from the point of view of the overall future development of Dade County. This location should be analyzed as part of an interconnected multi-system of airports serving the projected needs of the south Florida region.

Remaining Work

Finalization of preliminary plan.

WATERPORTS AND WATERWAYS PLAN

This plan deals with a subject seldom included in metropolitan transportation studies. Miami, pre-eminent as an aviation center, has been slow in developing its potential as a maritime center. By the close of World War II Miami had emerged as vastly more than a winter resort town. From this time its seaport was inadequate. The growing cruise passenger trade suffered because of inadequate terminal facilities, and the larger ships were forced to berth at Port Everglades. Fort Lauderdale was able to upstage Miami with the development of its port in the postwar era because of Port Everglades closer proximity to deep water shipping lanes and the beginnings of a natural harbor, and because of Miami's obsolete port.

Plans set forth by this component of MUATS are merely a start and will need periodic revision. If the prime concern of transportation is getting persons and goods from here to there economically, conveniently and efficiently, facilities for recreational boating are omitted. While the bay and ocean waters, and some of the inland waterways in the county have important potential for recreational use, they are not considered as "transportation arteries."

Goals and Objectives

The Dade County community must determine the nature and extent of port development that is in the public interest and the linkages required with other components of the local transportation system. The specific objectives become:

1. The Port of Miami should become the nation's number one cruise passenger port, realizing a scarcely tapped potential.
2. Compatibility of port and waterway development and activity with tourism, the major local industry and employer, and with the natural environment must be ensured.
3. Consideration must be given to the entire Gold Coast economic region as one community for purposes of water-borne commerce and transportation planning and development, seeking to complement rather than duplicate facilities.
4. Seek to determine the role of ports in the countywide transportation system and the required rail, highway, and transit linkages with the other components of the system.

Alternative Proposals

Possible alternatives are limited. Dodge Island is a fait accompli. The import-export "hinterland" is the three-county Gold Coast, and to a lesser extent, Monroe County. Miami is still the major population center, but more rapid growth is occurring in more centrally located Broward County. Manufacturing, still centered in Dade, may not always be. Hinterland for Caribbean cruise passengers is not limited to the immediate area, or the state.

Port Everglades, 21 miles north, is in the geographic and probable future population center of the region. Its harbor is good, close to deep water, and there are both space and plans for expansion. It handles the preponderance of bulk cargos for the whole region. These products are comparatively low in value in relation to bulk. They include petroleum, cement, building materials,

etc. Little manufacturing or processing industry is located at the port.

Miami's port, conversely, deals in general cargo and packaged commodities with a high ratio of value to bulk. (In 1965 Miami was the sixth Florida port in volume of cargo, but third -- behind Tampa and Jacksonville -- in value.) Miami is also ahead of Port Everglades in annual number of passengers. When Port of Miami facilities are completed, passenger trade can be expected to pick up rapidly and shipments of packaged general cargo to increase.

The basic alternatives include:

1. Continue planned expansion and development of Port of Miami as needed. Concentrate on passengers and low-bulk, high-value general cargo, both "clean" operations compared to that at Port Everglades. This complements Port Everglades without duplicating it, each port performing the function within their common economic area to which each is best suited and can best perform.

Subalternative a. Develop a secondary cruise port at southern tip of Miami Beach, off MacArthur Causeway. For smaller vessels serving nearby Bahama Islands.

2. An industrial port for Dade County. Specialized bulk cargo facility. Not suited to Dodge Island location, even if expanded. Would include allied industry.

Subalternative a. A South Dade port, as shown in the General Land Use Master Plan. Such a facility could add to economic well-being of this part of county. Unless strictly controlled, could also harm bay. Would complement Port of Miami facility but possibly compete with Port Everglades.

Preliminary Conclusion and Recommendations

It should be recalled that the three-county Gold Coast region operates as a single economic and physical entity, and that the major bulk cargo port for this area already exists, at Port Everglades in Broward County. It is well situated in the center of the region which is experiencing the fastest growth, and the port has capabilities for expansion to continue its role as bulk commodity distributor for the region. The Port of Miami can best serve its community and the larger hinterland by complementing Port Everglades -- by concentrating on containerized general cargo of high value, building the Caribbean export trade, by becoming the nation's leading port in passenger traffic, and by developing as a center for oceanographic activity. Expansion in these fields can remain compatible with the maintenance of a clean harbor and bay, so important to a major resort center.

The new port, under construction, is far from operating at capacity. Completion of the new passenger terminal in time for the 1968-69 winter cruise season will be a major milestone. A continuing landscaping and beautification program is essential. Just what expansion beyond present plans will be necessary, and when, will be detailed in the long-range development master plan which the Seaport Department will soon undertake. It is the preliminary conclusion of MUATS that, since Dade County took over and moved Miami's seaport to Dodge Island its development has been on the right track; the type of cargo and passenger operation

being steadily and carefully built is in the best interests of our metropolitan community; any major deviation from the port's established trend should be closely scrutinized.

It may soon become apparent that local ground transportation serving the port is inadequate. The port, particularly its passenger terminal, should have direct, high-speed, regularly scheduled transit to downtown Miami and Miami Beach. It should be included in any rapid transit plans for Metropolitan Dade County. While it is important to make parking for private vehicles and taxis available at the port, there must also be good public transportation. This could, since the port site is an island, take the form of water-borne rapid transit, using hydrofoil or hovercraft vehicles in regular cross-bay shuttle service. Additional highway access should also be examined.

It would seem duplication of effort and expenditure to develop a major cruiseport at Miami Beach, where a small one exists now, though the possibility might need exploration in the future. True, passenger vessels bound for the Port of Miami must pass right by South Beach and the slip on MacArthur Causeway but it is unlikely that ocean-going vessels would make an interim "stop" so near their destination.

The Miami River, as Dade County's busiest waterway, needs to be "reworked" as an urban waterway, with bulkheading the entire length of its navigable portion, and a continuing cleanup effort.

The subject of a heavy industrial port has not been exhausted here for several reasons. Clearly Dodge Island is not the place for such an operation, rubbing elbows as it does with downtown, the residential islands and proposed park area. The possibility of a mainland seaport in southern Dade County is currently being explored in depth, as a consultant has been engaged by the Chamber's Committee of 21 to determine its feasibility. Factors to be considered and those bearing heavily on overall port feasibility include the potential duplication of Port Everglades' facilities, at greater expense because of the necessity for an extended channel across the bay and additional highway (and rail) construction to get there from the urban area. If it can be shown feasible, the next question is: can it be demonstrated desirable?

It must therefore be the recommendation of this report that the oft-discussed hydrological, biological, ecological study of Biscayne Bay, complete with operating hydraulic model, be undertaken and completed before much more is done to alter the natural condition of the southern bay. Such a study is costly, but its necessity has been pointed out repeatedly. Federal participation can probably be obtained, possibly through Department of the Interior. If Miami is to become a national center for oceanography we should begin by studying our own bay.

Remaining Work

The highway, rail, and transit linkages to the new Port of Miami and proposed additional ports will continue to be evaluated in the remaining testing of future highway and transit networks. Also, financial requirements for ports and waterways proposals will be developed for inclusion in overall transportation plan.

PLAN IMPLEMENTATION

The action phase of the MUATS study -- plan implementation -- will logically follow completion of the initial study effort. However, aspects of the preliminary study recommendations are already being put into effect. For example, several of the bus lines that were developed as part of a proposed 1985 transit system have recently been placed in service by the Transit Authority and have already proven to be successful. Whenever feasible, continued early implementation of MUATS findings will be made.

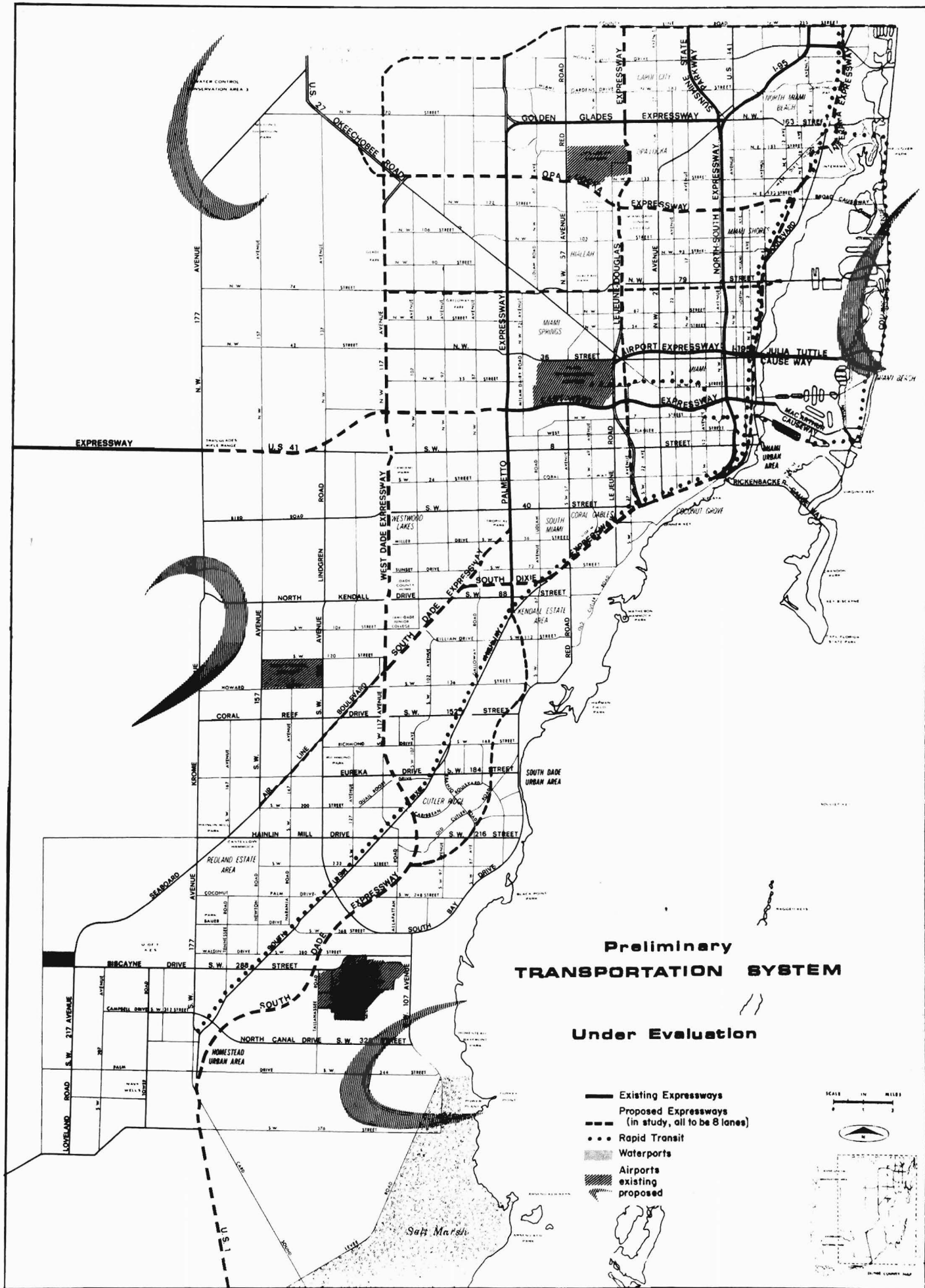
CONTINUING PROGRAM

The continuing program to be developed after the final approval of MUATS recommendations would have as its primary functions:

1. Maintain up-to-date inventory of traffic and transportation facilities and all travel data pertinent to continuing studies and re-evaluation of transportation proposals.
2. Provide service in the form of information, advice and guidance for all agencies working in transportation-related activities and to the public.
3. Test and evaluate alternate highway and transportation system proposals for local or countywide projects.
4. Undertake research leading to improved techniques in analysis of data and development of system recommendations for the study area.

The application for a federal grant for a Technical Study on Rapid Transit for Dade County is an example of the type of projects that will be prepared in order to implement the recommendations of MUATS.

The continuing program will be prepared as a joint effort of different county agencies with the cooperation of the State of Florida and the Federal Government.



**Preliminary
TRANSPORTATION SYSTEM**

Under Evaluation

- Existing Expressways
- - - Proposed Expressways
(in study, all to be 8 lanes)
- • • Rapid Transit
- Waterports
- Airports
existing
proposed



Salt Marsh

*study
design*

*MIAMI URBAN AREA TRANSPORTATION STUDY
Metropolitan Dade County, Florida*

transportation

STUDY DESIGN
MIAMI URBAN AREA TRANSPORTATION STUDY
METROPOLITAN DADE COUNTY PLANNING DEPARTMENT

Prepared

Under the General Supervision of

ALAN M. VOORHEES & ASSOCIATES, INC.

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MARCH 1965

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PREFACE

The attached study design has been developed jointly with the State Road Department and the various agencies involved in transportation planning in Dade County. It attempts to describe how Dade County can effectively prepare a long-range plan to guide the development of the County and to provide for a balanced transportation system.

The work program developed is in line with the various Federal directives and has been set up on a continuing, comprehensive and cooperative basis.

It is continous in that all the information will be collected and analyzed on a continuing basis and in that after plans are developed they will be reviewed from time to time to determine whether they are in keeping with the latest trends.

The program is comprehensive in that it takes into consideration all the factors that are involved in land use and transportation planning as defined by the Bureau of Public Roads and the Housing and Home Finance Agency.

It is cooperative in that it calls for the participation of all County and State agencies involved in the development of the metropolitan region.

This program has been designed to reflect the guidelines that have been set up by the Housing and Home Finance Agency in its Planning Letter No. 44; namely, that the planning process should include:

- . Development of Objectives
- . Determination of Future Transportation Demand Based on Forecast of Future Activity

- . Proposing Alternative Transportation Systems
- . Determination of Future Travel Demand by Mode
- . Testing Transportation Alternatives

This Study Design outlines a continuing and comprehensive transportation planning program for Dade County. This program is designed to guide the development of street and highway, transit and terminal improvements in a manner which is consistent with the County General Land Use Master Plan and which will afford the public the best possible transportation services.

This program has been designed to help evaluate existing transportation policies and practices, to coordinate transportation and city and metropolitan planning, to assess existing and future transportation deficiencies, to prepare plans to improve transportation services, and to establish transportation priorities.

Objectives

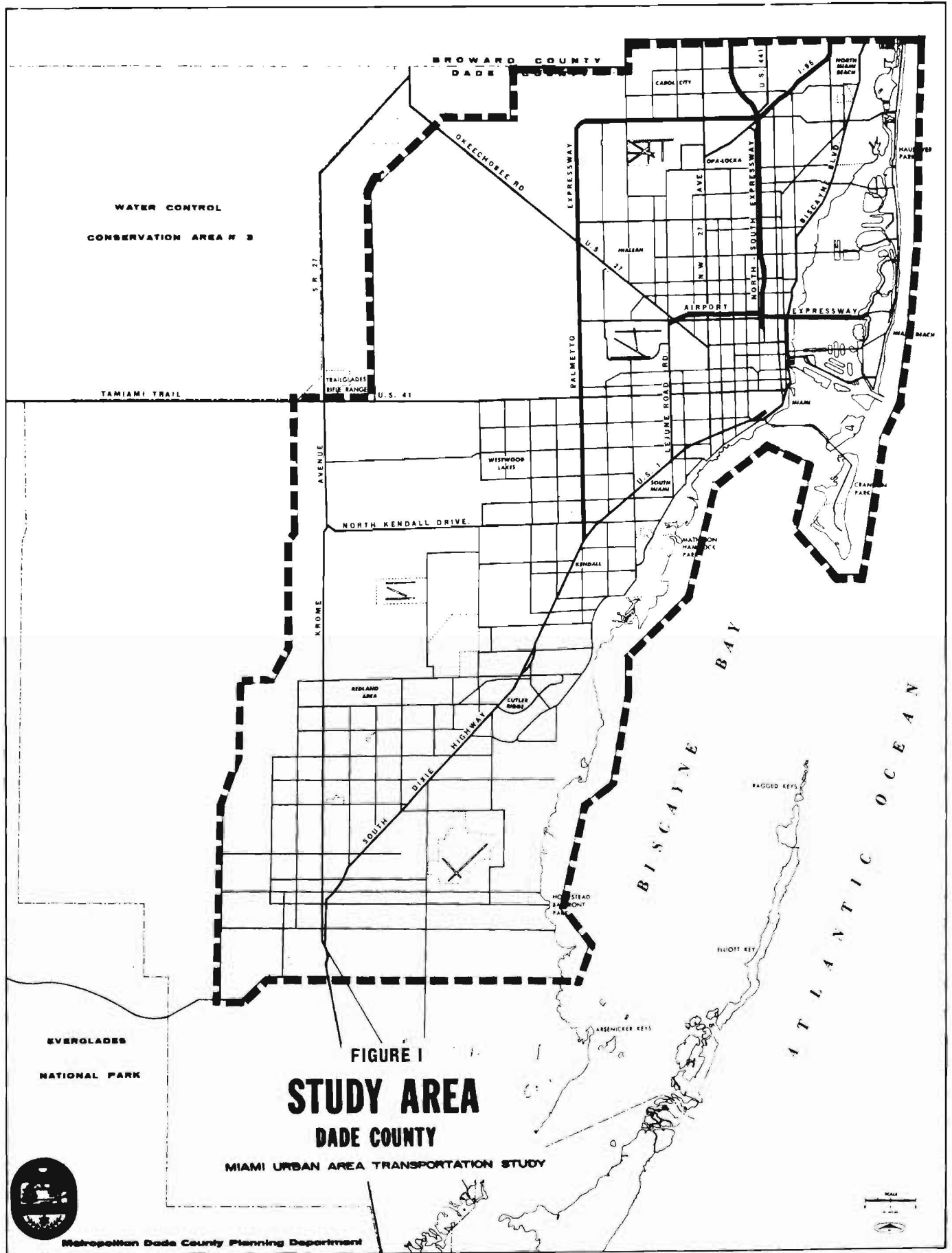
This program is aimed at the following objectives.

1. Setting up an organization for carrying out this program.
2. Defining the division of work between the State and County.
3. Recommending a work schedule.
4. Estimating budget requirements.

Study Area

The study would be limited to Dade County for all planning purposes, though in updating economic and population studies the entire Southeast Florida Region will be considered. (See Figure I)

In 1960 this County, with an area of 2,352 square miles, had a population of 935,047. It is anticipated that by 1985 this population will have risen to approximately 2,500,000.



WATER CONTROL
CONSERVATION AREA # 3

TAMIAMI TRAIL

S.R. 27

AVENUE

KROME

NORTH KENDALL DRIVE

SOUTH DIXIE HIGHWAY

FIGURE I

STUDY AREA
DADE COUNTY

MIAMI URBAN AREA TRANSPORTATION STUDY

EVERGLADES
NATIONAL PARK



Metropolitan Dade County Planning Department



Past Transportation Studies

In 1950 the State Road Department undertook a home interview O-D Study of the Miami Area. This study included an analysis of both winter and summer traffic. These data were updated in 1958 by Wilbur Smith and Associates for their feasibility study. With the creation of this program, another O-D Study was undertaken by the State Road Department.

Local Planning Program

In January 1961 the Preliminary Land Use Plan and Policies for Development, formulated by the Planning Department and Planning Advisory Board, was approved in principle by the Board of County Commissioners (Resolution No. 6202).

Since then, this Preliminary Plan has been discussed with most of the municipalities in Dade County and with numerous civic, business and service groups. This evaluation of the plan provided many helpful suggestions for improvement to the plan.

For two years this Preliminary Plan was under further study and refinement by the Planning Advisory Board and Planning Department, working in close cooperation with other departments and agencies of the county government. The resultant General Land Use Master Plan was adopted by the Planning Advisory Board on October 3, 1963, and approved in principle by the Board of County Commissioners on October 8, 1963. Finally after a series of public hearings and modifications to the plan, the General Land Use Master Plan was adopted by the Board of County Commissioners on November 30, 1965.

The following Federal planning assistance programs which have been carried out, or are being carried out, by Dade County or the City of Miami have been carefully considered in setting up this program. This study will depend a great deal on the data that have been developed in these studies.

Fla. P-7

Dade County's first Urban Planning Assistance Grant was approved on July 1, 1959, for a general long-range planning program. The Fla. P-7 project was scheduled for 18 months. The work items included in P-7 were:

1. A Study of the Economic Base for Dade County, Florida
2. An Inventory of Existing Land Use in Dade County, Florida
3. An Analysis of Existing Land Use in Dade County, Florida
4. Preliminary General Land Use Plan for Dade County, Florida
5. Base Map and Map Information Program for Dade County, Florida

Fla. P-14

The next Urban Planning Assistance Grant for Dade County was approved July 6, 1960. This project was completed in March 1965 and included the following items:

1. General Land Use Plan for Dade County, Florida
2. Analysis of Existing Zoning Control and Procedures in Dade County, Florida
3. Zoning Standards and Procedures and Model Zoning Ordinance for Dade County, Florida
4. Subdivision Procedures and Regulations for Dade County, Florida
5. Capital Improvement Procedures for Dade County, Florida

City of Miami Community Renewal Program

This program is divided into three phases.

Phase I

This will be a general, overall, city-wide study to ascertain:

1. Present trends toward deterioration and need for renewal
2. Future prospects for deterioration and renewal
3. Desirable objectives and standards for a conscious program of renewal
4. Resources available for stimulating renewal activity.
5. Problem areas requiring more detailed study

Phase II

This will involve an analysis of problem areas identified in Phase I in order to develop a sympathetic understanding of what trends are taking place within them and of what opportunities may exist for improving and/or stabilizing them. Phase II will result in a specific renewal program for each area.

Phase III

This will involve the translation of the findings and recommendations of Phases I and II into a time-phased program for inter-related public and private action. The program will be in two parts, one part to be a generalized program covering a period from 1966 through 1986 and the other part to be a specific program for the six-year period from 1966 through 1972.

ORGANIZATION

Figure II shows how the program is organized to assure effective coordination between the State and the County. First of all, a Memorandum of Agreement has been signed by the State Road Department and Dade County. This defines who is responsible for various phases of the transportation and land use studies.

A Policy Committee has been established to guide the general progress of the program.

Two study directors have been appointed; one by the State Road Department, the other by Dade County.

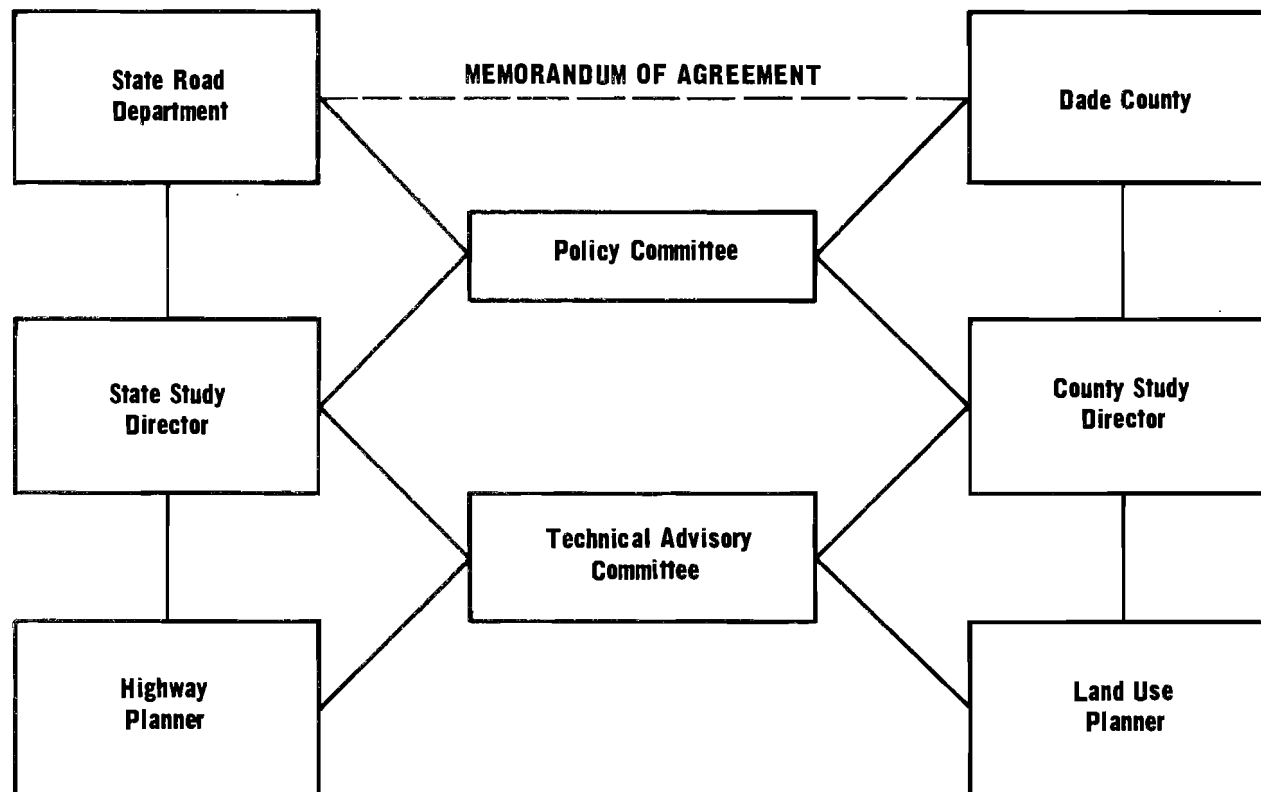
A Highway Planner has been appointed by the State Road Department, and a Land Use Planner has been designated by Dade County. These two Planners are responsible for guiding the program from a technical point of view. To assist these Planners in their work, the Technical Advisory Committee was appointed.

The interrelationships between the various committees and the Study Directors are shown on Figure II. Their functions are described below.

Policy Committee - This committee includes the following persons: the State Road Board Member from District 4, the County Manager for Dade County, and, representative of the U. S. Bureau of Public Roads. The representative from the Bureau of Public Road is ex officio and will be a non-voting member.

The Policy Committee is assisting in defining the scope and objectives of the study and is responsible for overall guidances to the study. It has appointed the members of the various advisory committees as well as reviewed

**FIGURE II
ORGANIZATION OF DADE COUNTY TRANSPORTATION STUDY**



and approved the appointments of the Study Directors, - Highway Planner and Land Use Planner. The Policy Committee will take an active part in evaluating the alternative plans and will make recommendations to the participating agencies. This committee will also be responsible for developing and maintaining a public support program.

Technical Advisory Committee - This committee is composed of representatives from the following agencies: the U.S. Bureau of Public Roads, the Florida State Road Department, Metropolitan Dade County's Planning Department, Public Works Department, the Port Authority, and Transit Authority.

The purpose of the Technical Advisory Committee is to serve as a clearing house for the assembly and evaluation of pertinent data, and to exchange ideas and concepts on transportation problems.

Study Directors - The Study Directors shall have general responsibility for the technical phase of the study.

Highway Planner - He is responsible for all work that the State Road Department does in connection with the study. He has been assigned full time to the study.

Land Use Planner - He is responsible for all the work that will be undertaken by Dade County. He has been assigned full time to the study.

PLANNING PROCESS

The general approach for this program envisions the preparation of a comprehensive transportation plan that is coordinated with the General Land Use Master Plan. This program will make it possible to detail the transportation needs that are necessary to implement the land use plan.

As indicated by Figure III, the work program is divided into five stages.

1. Collection of Data
2. Analysis and Development of Goals and Standards
3. Plan Formulation and Testing
4. Plan Review and Adoption
5. Continuing Program

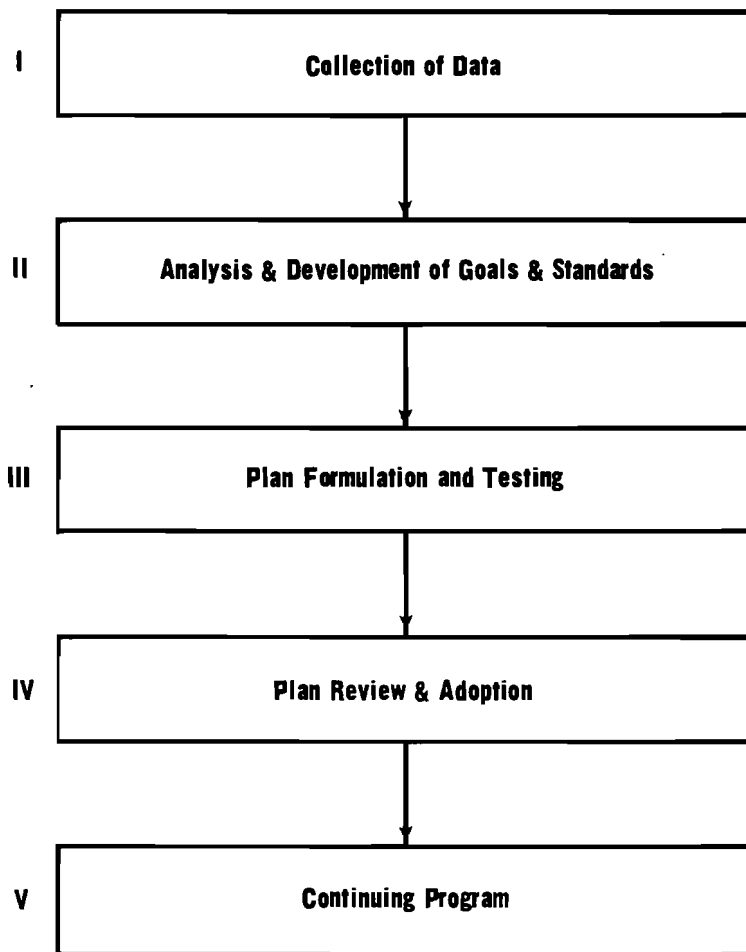
As can be seen by the outline on page 9, the data collection phase deals with two types of information -- that related to transportation and that related to general planning. The transportation phase includes: street and highway facilities, traffic operations, transit and terminal facilities, air port, harbors, and travel patterns. The planning phase includes: economic factors, governmental and social population, land use, laws and ordinances, and financial resources.

The analysis and development of goals and standards phase provides for evaluation of data collected as well as evaluation of existing goals and standards. In addition, this phase will include recommendations for adoption of certain transportation goals and standards.

On the basis of existing land use and transportation plans which have been set forth in the General Land Use Master Plan, traffic will be forecasted and assigned to the various transportation facilities proposed in this plan. The assigned traffic volume should be compared with capacity standards for the various proposed transportation facilities to test their adequacy. The plans should also be tested in terms of how well they meet the economic and social goals for the region. These tests will undoubtedly point to some alternatives which should then be tested and re-evaluated. This process of testing and evaluating alternative plans should continue until a plan is developed which best accommodates the needs of the region in the eyes of the various advisory committees. This plan will then be submitted to the various agencies involved to review, and when appropriate, to adopt such a plan.

FIGURE III

WORK PROGRAM FOR DADE COUNTY TRANSPORTATION STUDY



As a part of the continuing program new needs will undoubtedly develop which were not anticipated in the original planning process. Therefore, it will be necessary to consider new solutions. This will call for the evaluation of various possible alternatives, weighing these alternatives in light of the facts that are available to see which alternative best fits in with the goals of the area and is economically justified. This process will assure that the plan that is developed will be adjusted as new needs unfold in the future.

Although the fact-gathering and analysis stages will be done separately by the State and the County for their own particular area of interest, they will work together in testing and evaluating plans.

The following outline details the various elements or events in each of the five stages and assigns a code number to each:

I. DATA COLLECTION

- 1-1 Financial Program
- 1-2 Governmental Considerations
- 1-3 Social Factors
- 1-4 Economic Factors
- 1-5 Population Factors
- 1-6 Land Use Activities
- 1-7 Streets and Highways
- 1-8 Public Transit
- 1-9 Airports
- 1-10 Waterports and Waterways
- 1-11 Terminal Facilities
- 1-12 Laws and Ordinances
- 1-13 Continuing Program
- 1-14 General Plan for County

II. ANALYSIS AND DEVELOPMENT OF GOALS AND STANDARDS

- 2-1 Financial Program
- 2-2 Governmental Considerations
- 2-3 Social Factors
- 2-5 Economic and Population Factors
- 2-6 Land Use Activities
- 2-7 Streets and Highways
- 2-8 Public Transit
- 2-9 Airports
- 2-10 Waterports and Waterways
- 2-12 Laws and Ordinances
- 2-13 Continuing Program

III. PLAN FORMULATION AND TESTING

- 3-1 Financial Program
- 3-6 Land Use Activities
- 3-7 Transportation Plan (Streets and Highways)
- 3-8 Public Transit
- 3-9 Airports
- 3-10 Waterports and Waterways
- 3-11 Terminal Facilities

IV. PLAN REVIEW AND ADOPTION

- 4-7 Transportation Plan Review and Adoption

V. CONTINUING PROGRAM

- 5-13 Surveillance Program

Each event in the work program is detailed on the following pages showing objective, method, time and staff requirements, date of completion and cost estimates.

To the right of the title of each event appears two numbers in parenthesis which indicate the position of the event on work program path. (See Figure IV).

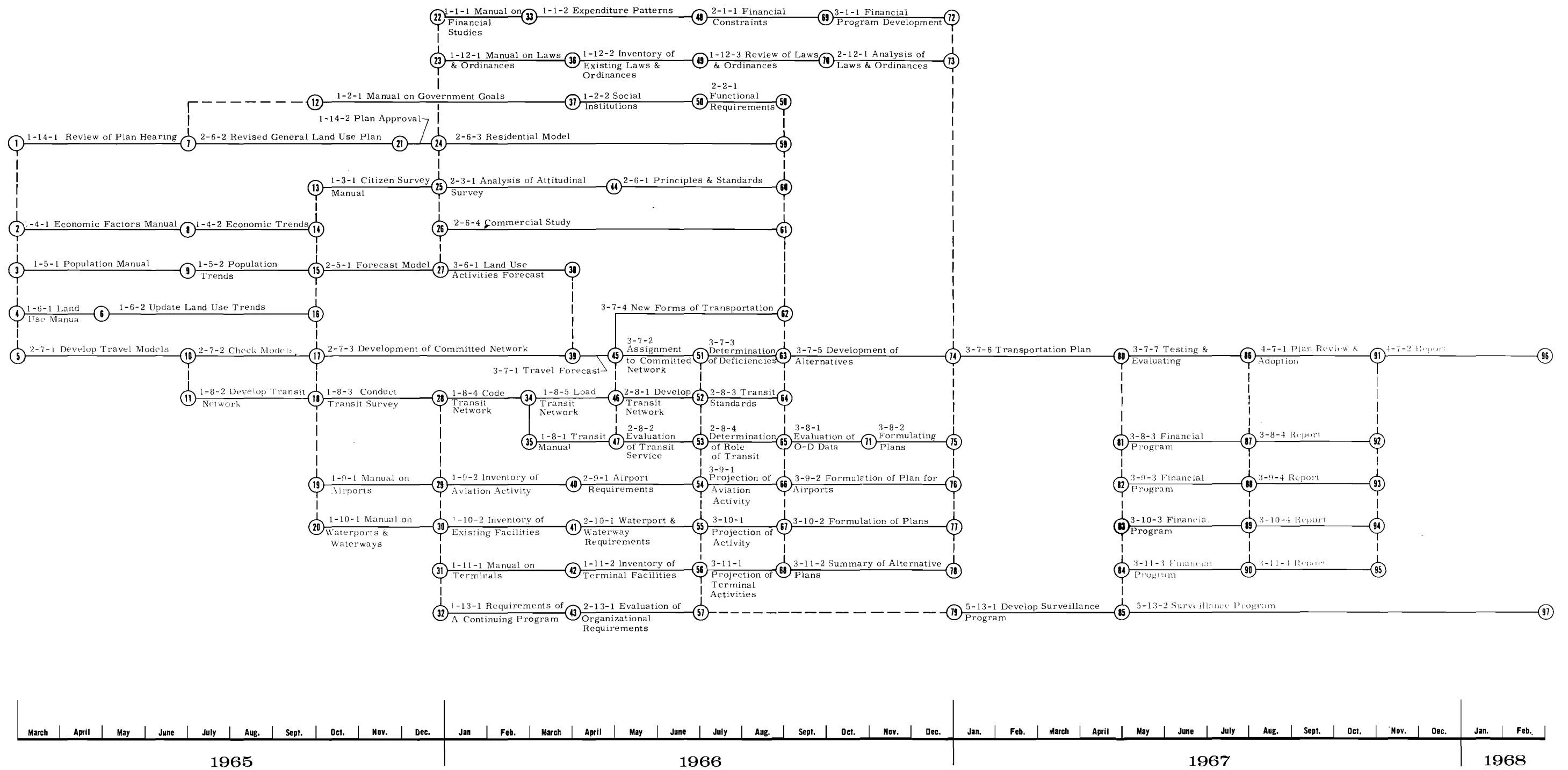


FIGURE IV
WORK PROGRAM FOR A LAND USE & TRANSPORTATION STUDY
FOR THE DADE COUNTY AREA

I. DATA COLLECTION

1-1 FINANCIAL PROGRAM

1-1-1 Manual on Financial Studies

Objective

A manual will be prepared to obtain information on governmental expenditure patterns related to transportation and other public improvements.

Method

This step will entail gathering of information on existing financial practices with regard to financing transportation facilities and services including historical trends on expenditure patterns. Various publications from other areas dealing with the subject will be reviewed.

Time Requirement

Two months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

February 1966

Cost

\$5,000

1-1-2 Expenditure Patterns (33-48)

Objective

The objective of this step is to gather and develop information which shows governmental expenditures on transportation as well as other public improvements, and historical trends on these expenditures.

Method

This step will determine from existing records the amount of funds expended on construction, maintenance and operation of publicly financed transportation facilities. An historical pattern of such expenditures will also be established from existing records.

Time Requirement

Four months

Staff Requirement

Four man-months

Date of Completion

June 1966

Cost

\$2,000

1-2 GOVERNMENTAL GOALS AND FACTORS - LAWS AND ORDINANCES

1-2-1 Manual on Governmental Goals (12-37)

Objective

An outline will be prepared to obtain information on existing goals, and to develop governmental goals for the county.

Method

This will involve a review of existing goals and policy set forth in the General Land Use Master Plan and a series of public hearings and review by the Dade County Board of County Commissioners. Information will be developed by the county, whether local or county-wide in its implication.

Time Requirement

Completed

Staff Requirement

None

Date of Completion

This step is completed.

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

1-2-2 Social Institutions (37-50)

Objective

Identify, evaluate purpose of, and existing standards of social institutions.

Method

Survey existing institutions to identify present patterns of location, size, activity (interims of personal travel), purpose, and other such information about schools, libraries, hospital, religious, and other related social facilities. Identify trends and problems affecting the future of the area social institutions.

Time Requirements

Three months

Staff Requirement

Four man-months.

Date of Completion

June 1966

Cost

\$4,000

1-3 SOCIAL FACTORS

1-3-1 Citizen Survey Manual (13-25)

Objective

The objective of this step is to prepare a manual on conducting a survey of public officials and a citizen survey in connection with the home interview. This manual will show how this information will be coded and punched.

Method

This step will be involved with preparation of a manual that will outline the steps that are involved in conducting the citizen survey and the survey of public officials. It should also show how this information collected in connection with the home interview will be coded and punched.

Time Requirement

Three months

Staff Requirement

Two man-months

Date of Completion

December 1965

Cost

\$2,000.

1-4 ECONOMIC FACTORS

1-4-1 Economic Factors Manual (2-8)

Objective

To provide a plan for gathering pertinent information on economic factors relevant to the transportation planning process such as income and employment distribution, car ownership, and retail sales activities.

Method

Review approaches followed elsewhere. Review F.H.A. 701 contract commitments and those of the State Road Department to assure compliance. Survey available data resources. Design manual to best match needs and resources.

Time Requirement

Four months. Unquestionably, modification and expansion of the manual will continue for the life of this job.

Staff Requirement

Two man-months.

Date of Completion

June 1965

Cost

\$2,000.

1-4-2 Economic Trends (8-14)

Objective

To assemble historical data on the development of the county's economy. Particular emphasis will be placed on elements which bear on trip generation and attraction, i. e., employment, income, car ownership, and retail sales.

Method

To update findings of the 1959 Economic Base Study by means of such sources as University of Florida income estimates by county, Florida State Employment Service employment data, and State data on vehicle registrations. Emphasis will be placed on recasting the Economic Base Study into terms needed as in-puts for the transportation study.

Time Requirement

Three months.

Staff Requirements

Three man-months.

Date of Completion

September 1965

Cost

\$3,000.

1-5 POPULATION FACTORS

1-5-1 Population Manual (3-9)

Objective

To provide a plan for developing population estimates for Dade County as a whole to the year 1985 and for intervening five-year periods.

Method

Review approaches followed by others to produce similar estimates both for Dade County and for other areas. Review in particular the methodology followed in the 1959 Economic Base Study.

Time Requirement

Four months

Staff Requirement

Two man-months.

Date of Completion

June 1965

Cost

\$2,000.

1-5-2 Population Trends (9-15)

Objective

To assemble historical data essential to produce population forecasts for the county as determined in the Population Manual (1-5-1). This will primarily involve updating data presented in the

Economic Base Study on population composition, vital statistics, migration, and mobility.

Time Requirement

Three months

Staff Requirement

One and one-half man-months.

Date of Completion

September 1965

Cost

\$1500.

1-6 LAND USE ACTIVITIES

1-6-1 Land Use Manual (4-6)

Objective

To provide a plan for updating the 1962 land use study with particular emphasis on reconstituting output by traffic zone.

Method

This will primarily involve how to update data obtained in the 1959 land use studies.

Time Requirement

Two months.

Staff Requirement

Four man-months.

Date of Completion

April 1965

Cost

\$4,000.

1-6-2 Update Land Use Trends (6-16)

Objective

To update the 1959 land use study (most recent updating in 1962).

Method

This will primarily be done by building permit data and land use field checks.

Time Requirement

Five months.

Staff Requirement

Eight man-months

Date of Completion

September 1965

Cost

\$8,000.

1-7 STREETS AND HIGHWAYS

1-7-1 Development of Street Network

Objective

This step includes selection of the network for testing, including the links that will be used to describe the network.

Method

In this preliminary stage information on the operational characteristics of the existing network will permit computerizing the system and testing the system under future loads to determine its deficiencies.

Time Requirement

Completed

Staff Requirement

Responsibility of State

Date of Completion

Completed.

Cost

1-8 PUBLIC TRANSIT

1-8-1 Transit Manual (35-47)

Objective

This study is designed to outline how and what information must be obtained on public transit to plan for a balanced system of transportation.

Method

This phase of the work program will include preparation of a manual on existing public and private transportation services in the area. It will show how to collect data on transit usage, travel patterns, and passenger requirements along the existing transit routes.

Time Requirement

Two months

Staff Requirement

Two man-months.

Date of Completion

April 1966

Cost

\$2,000.

1-8-2 Development of Transit Network (11-18)

Objective

The objective of this step will consist of selecting the transit system and devising a simplified way of presenting the operations of the transit system.

Method

The existing transit system will be surveyed in reference to transit routes and coverages and the existing transit network will be identified.

Time Requirement

Three months

Staff Requirement

Two man-months.

Date of Completion

September 1965

Cost

\$2,000.

1-8-3 Conduct Transit Survey (18-28)

Objective

This step will involve the inventory of existing public and private transportation services in the study area.

Method

The existing transit system will be surveyed and the following data collected, in reference to:

- a. Transit route
- b. Passenger load data
- c. Service frequency and regularity
- d. Transit running time schedule
- e. Vehicle miles operated
- f. Transit speed and delay studies
- g. Headways by route - peak and off peak
- h. Passenger riding habits
- i. Distribution of riding by hour of the day

Contacts will be made at all existing bus companies, getting information on routes, schedules and passengers.

Time Requirement

Three months

Staff Requirement

Four man-months.

Date of Completion

December 1965

Cost

\$4,000.

1-8-4 Code Transit Network (28-34)

Objective

The objective of this step is to get information from previous steps ready for computer analysis.

Method

On the basis of information obtained in the survey the transit network will be coded for computer application. This will include information on the speed of transit lines, headways, as well as transfer times.

Time Requirement

Two months.

Staff Requirement

Two man-months.

Date of Completion

February 1966

Cost

\$2,000.

1-8-5 Load Transit Network (34-46)

Objective

The objective of this step is to evaluate transit movements in connection with known transit volumes.

Method

The origin and destination obtained from the home interview on transit usage will be assigned to the existing transit network. This will check assignment procedures as well as the O-D path.

Time Requirement

Two months

Staff Requirement

Two man-months

Date of Completion

April 1966

Cost

\$2,000.

1-9 AIRPORTS

1-9-1 Manual on Airports (19-29)

Objective

This step is designed to develop a guide for collection of information on airport activities in Metropolitan Dade County.

Method

This phase of the work program will include preparation of a manual on how to collect information on present aviation activities in the metropolitan area. It will include commercial, public, private, and military airport operations. Present air trade area will be described and compared with other areas having similar traffic volumes.

Time Requirement

Three months

Staff Requirement

Two man-months

Date of Completion

December 1965

Cost

\$2,000.

1-9-2 Inventory of Aviation Activity (29-40)

Objective

This step will involve the inventory of aviation activity within Dade County including air carrier, general aviation, and military operations.

Method

Data on the existing air activities will be assembled and compiled in accordance with the F. A. A. outline on airport studies.

Time Requirement

Three months.

Staff Requirement

Four man-months.

Date of Completion

March 1966

Cost

\$4,000.

1-10 WATERPORTS AND WATERWAYS

1-10-1 Manual on Waterports and Waterways (20-30)

Objective

This step is designed to develop a guide for collection of information on waterports and waterways in Metropolitan Dade County.

Method

This phase of the work program will include preparation of a manual on data collection on present and expected waterports and waterways activity in Metropolitan Dade County. Consideration will be given both to commercial and recreational aspects of the problem. It will study also the anticipated conflicts between water and land transportation movements.

Time Requirements

Three months

Staff Requirement

Two man-months

Date of Completion

December 1965

Cost

\$2,000.

1-10-2 Inventory of Existing Facilities (30-41)

Objective

The existing activity of waterports and waterways will be surveyed.

Method

The following data collected, in reference to classification of waterports and waterways; inventory of water-borne traffic; inventory of existing accessories including bridge clearance, salinary dams, locks, depth and width of all major canals and waterways; and conflicts between water and land transportation movement. Contacts will be made at all existing waterport and waterways authorities, getting information on routes, transportation schedules, passengers, cargo and area trade limits.

Time Requirement

Three months

Staff Requirement

Four man-months

Date of Completion

March 1966

Cost

\$4, 000.

1-11 TERMINAL FACILITIES

1-11-1 Manual on Terminals (31-42)

Objective

This step is designed to develop a guide for collection of information on railroads and terminal facilities for all types of transportation, including auto parking at selected commercial centers.

Method

This phase of the work will include preparation of a manual on data collection on railroad activities, terminal facilities for all types of transportation, including auto parking at selected commercial centers. Movements of people and of goods will be considered, and special attention will be given to the traffic-generating characteristics of terminal facilities.

Time Requirement

Three months.

Staff Requirement

Two man-months.

Date of Completion

March 1966

Cost

\$2,000.

1-11-2 Inventory of Terminal Facilities (42-56)

Objective

A complete inventory of the following terminal facilities will be performed to form a basis for the later analysis and planning phases.

Method

Considerable information can be obtained from bus companies, trucking firms, etc., but field work will be involved to a great extent to gather information on parking.

- a. Railroad freight and passenger terminals, and classification yards
- b. Airport facilities
- c. Harbors, including cargo and cruise docks, and major marinas
- d. Bus terminals, including stations and storage and maintenance yards
- e. Truck terminals, storage yards and major loading areas
- f. Off-street parking areas (those which are considered major auto terminals, including car rental agencies)

The inventory information should include capacities, rates, turnover, tonnage handled, facilities for expansion, location and area served, etc.

Time Requirement

Three months

Staff Requirement

Four man-months.

Date of Completion

June 1966

Cost

\$4,000

1-12 LAWS AND ORDINANCES

1-21-1 Manual on Laws and Ordinances (23-36)

Objective:

The purpose of this step is to prepare a manual to indicate how to develop information on existing Florida and Dade County laws and ordinances related to transportation planning.

Method

This will call for a review of existing statutes related to transportation planning, development and operation of transportation facilities.

Time Requirement

Three months

Staff Requirement

One man-month

Date of Completion

March 1966

Cost

\$1,000.

1-12-2 Inventory of Existing Laws and Ordinances (36-49)

Objective

The objective of this step is to compile the laws and ordinances that effect and affect transportation planning and operation of transportation facilities.

Method

Determine the types of laws that are now on the books related to transportation planning, development and operation of transportation facilities. Review existing State enabling legislation to

determine if there are other appropriate measures and laws that can be used to carry out a transportation planning program.

Time Requirement

Three months.

Staff Requirement

Two man-months.

Date of Completion

June 1966

Cost

\$2,000.

1-12-3 Review of Laws and Ordinances (49-70)

Objectives

The objective of this step is to present a summary of the review of existing laws and ordinances.

Method

A report will be prepared summarizing the existing laws and ordinances and their deficiencies, showing types of new legislation, laws and ordinances that could be considered for development and implementation of the transportation planning program.

Time Requirement

Three months

Staff Requirement

One man-month.

Date of Completion

September 1966

Cost

\$6,000.

1-13 CONTINUING PROGRAM

1-13-1 Requirements of a Continuing Program (32-43)

Objective

Identify what constitutes a continuing program and what resources are needed to maintain such a program.

Method

Identify goals, policy, requirements established by Federal, State and local agencies which must be met to carry out the transportation planning program on a continuing basis.

Time Requirement

Three months

Staff Requirement

Two man-months.

Date of Completion

March 1966

Cost

\$2,000.

1-14 GENERAL PLAN FOR COUNTY

1-14-1 Review of Plan Hearing (1-7)

Objective

The objective of this step is to gain a consensus on a general plan for the County.

Method

A review will be made of the hearing on the general plan to determine how it might be modified to fit in with the development concepts for the County.

Time Requirement

Four months

Staff Requirement

None

Date of Completion

This step is completed.

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

1-14-2 Plan Approval (21-24)

Objective

The objective of this step is to obtain approval of the general plan for the County.

Method

The consensus determined in the previous step will be discussed by the Dade County Board of Commissioners and a final general plan approved.

Time Requirement

Completed

Staff Requirement

None

Date of Completion

This step is completed

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

II. ANALYSIS

2-1 FINANCIAL PROGRAM

2-1-1 Financial Constraints (48-69)

Objective

This step is to establish the general limitations to financing transportation facilities in the county.

Method

A review of other techniques used throughout the nation for financing roads and transportation facilities to determine their applicability to Florida's practices and procedures. Determine the over-all financial ability of local government units to absorb, additional financial burden.

Time Requirement

This will require two months to complete.

Staff Requirement

Two man-months will be required for this step.

Date of Completion

September 1966

Cost

\$2,000.

2-2 GOVERNMENTAL CONSIDERATIONS

2-2-1 Functional Requirements (50-58)

Objective

This step will provide a basis for updating existing principles and standards for various social institutions in terms of their special requirements and relationship to other activities in the area.

Method

Analyze existing standards identified in 1-2-2 and recommend functional requirements to be incorporated in any land use plan revision.

Time Requirement

Two months

Staff Requirement

Two man-months.

Date of Completion

August 1966

Cost

\$2,000.

2-3 SOCIAL FACTORS

2-3-1 Analysis of Attitudinal Survey (25-44)

Objective

The objective of this step is to analyze the attitudinal survey and to determine how and to what extent information derived from it will influence county policies and goals.

Method

The results of the attitudinal survey will be used positively to help formulate and revise, where necessary, county policies and goals.

Time Requirement

Four months

Staff Requirement

Four man-months.

Date of Completion

April 1966

Cost

\$5,000.

2-5 ECONOMIC AND POPULATION FACTORS

2-5-1 Forecast Model (15-27)

Objective

To design a forecasting model which will produce county-wide estimates of population, income, car ownership and employment.

Method

Review of 1959 Economic Base Study techniques; analysis of the inter-relationship of historic factors; study of models developed by others for larger regions; and the application of appropriate statistical techniques.

Time Requirement

Three months.

Staff Requirement

Two man-months.

Date of Completion

Completed

Cost

\$2, 000.

2-6 LAND USE ACTIVITIES

2-6-1 Principles and Standards (44-60)

Objective

The purpose of this step is to review existing standards established in the approved General Land Use Master Plan and develop revised principles and standards in the light of the new factual information developed in this study. These principles and standards will then be used as one of the bases for developing General Land Use Master Plan revisions.

Method

New information derived from citizens' survey, evaluation of social institutions, analysis of travel, and other transportation factors, land use analysis, and review of county goals will be summarized, evaluated, and used as a basis for establishing new or revised standards for land development and improvements in transportation systems. This will be an important factor in the feedback process resulting from testing and evaluation of alternative transportation plans.

Time Requirement

Four months.

Staff Requirement

Four man-months.

Date of Completion

August 1966

Cost

\$4,000.

2-6-2 Revised General Land Use Master Plan (7-21)

Objective

This is a multi-phase process which includes official approval of the General Land Use Master Plan, its goals and standards by the Metropolitan Dade County Commission. This also includes the process of revising the General Land Use Master Plan, its goals and standards in light of the findings of the transportation study. Most of the revisions of the General Plan will take place through a feedback process which occurs during the testing and evaluation of alternative transportation plans (see events 3-7-6 and 3-7-7), as these alter accessibility. The revised standards developed in 2-6-1, 2-6-3, and 2-6-4 will provide information in the revision process.

Time Requirement

Five months

Staff Requirement

Four man-months.

Date of Completion

Completed -- This is first phase of a continuous process and will be repeated in later stages of the study.

Cost

\$4, 000.

2-6-3 Residential Model (24-59)

Objective

The objective of this step is to develop a residential model.

Method

This phase will include the development of a residential model and the application of it in an effort to help detail the selected area alternative land use and transportation plan. This will involve some field work.

Time Requirement

Eight months.

Staff Requirement

Twelve man-months.

Date of Completion

August 1966

Cost

\$12, 000.

2-6-4 Commercial Study (26-61)

Objective

The objective of this step is to develop a commercial model.

Method

This phase will include the development of a model related to regional commercial activities that will be used to establish how such activities can best be arranged in light of the general alternative land use and transportation plan that has been selected.

Time Requirement

Eight months.

Staff Requirement

Twelve man-months.

Date of Completion

August 1966

Cost

\$12,000.

2-7 STREETS AND HIGHWAYS

2-7-1 Develop Travel Models (5-10)

Objective

The objective of this step is to develop a mathematical technique that can be used to forecast the traffic volumes between zones in the study area by times of day and mode of travel. This information will be necessary to test and evaluate alternative transportation systems.

Method

The models that will be developed will include a trip production and distribution model, and a modal split model.

Time Requirement

Four months.

Staff Requirement

Responsibility of State.

Date of Completion

Completed

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

2-7-2 Check Models (10-17)

Objective

The objective of this step is to check out the model as far as vehicles are concerned to see if the model is acceptable for projecting future vehicular volumes.

Method

The results of the model will be loaded on the highway network and compared with known vehicular volumes.

Time Requirement

Three months

Staff Requirement

Responsibility of State.

Date of Completion

Completed

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

2-7-3 Development of Committed Network (17-39)

Objective

The objective of this step is the final selection of the network for testing, including the links that will be used to describe the network.

Method

The existing network will be updated to account for committed improvements in the system and necessary links will be added. The committed system will be checked further under future loads to determine its deficiencies.

Time Requirement

Six months

Staff Requirement

Two man-months.

Date of Completion

March 1966

Cost

\$2,000.

2-8 PUBLIC TRANSIT

2-8-1 Develop Transit Model (46-52)

Objective

The objective of this step is to develop a mathematical technique to forecast transit usage, which will be used in evaluating transportation alternatives.

Method

The model that will be employed will take into consideration the variables at the origin and destinations ends of the trip as well as the characteristics of the alternative transportation systems between zones.

2-7-3 Development of Committed Network (17-39)

Objective

The objective of this step is the final selection of the network for testing, including the links that will be used to describe the network.

Method

The existing network will be updated to account for committed improvements in the system and necessary links will be added. The committed system will be checked further under future loads to determine its deficiencies.

Time Requirement

Six months

Staff Requirement

Two man-months.

Date of Completion

March 1966

Cost

\$2,000.

2-8 PUBLIC TRANSIT

2-8-1 Develop Transit Model (46-52)

Objective

The objective of this step is to develop a mathematical technique to forecast transit usage, which will be used in evaluating transportation alternatives.

Method

The model that will be employed will take into consideration the variables at the origin and destinations ends of the trip as well as the characteristics of the alternative transportation systems between zones.

Time Requirement

Two months

Staff Requirement

Responsibility of State

Date of Completion

June 1966

Cost

The cost of this step will be covered by other than the 701 Urban Planning Assistance Program.

2-8-2 Evaluation of Transit Service (47-53)

Objective

The objective of this step is to review and evaluate information gathered in preceding steps of the study. This will be supplemented by the review of existing goals and standards. These findings in turn will be presented for policy review.

Method

A series of interviews and discussions will be undertaken with key citizens and policy makers within the study area and a review will be made of goal statements from other jurisdictions. Subsequently existing transit service information will be correlated with information concerning communities needs as brought out in the State Road Department Studies.

Time Requirement

Two months.

Staff Requirement

To be accomplished by the transit consultant.

Date of Completion

June 1966

Cost

2-8-3 Transit Standards (52-64)

Objective

The objective of this step is to establish goals and standards for public transit in the area.

Method

This entails assembling and analyzing established standards in reference to:

- a. Routing
- b. Loading
- c. Frequency of service
- d. Frequency of transit stops
- e. Transit speed
- f. Adherency of schedule
- g. Extensions into new areas
- h. Curtailment or abandonment of service
- i. Use of system for carrying goods

Time Requirement

Two months

Staff Requirement

To be accomplished by transit consultant.

Date of Completion

August 1966

Cost

Time Requirement

Three months will be required for this work.

Staff Requirements

Two man-months will be required

Date of Completion

June 1966

Cost

\$2,000.

2-10 WATERPORTS AND WATERWAYS

2-10-1 Waterport and Waterway Requirements (41-55)

Objective

The objective of this step is to establish what goals and standards in reference to waterports and waterways have been developed in the area or have been articulated either by citizens, public officials, or other governmental sources.

Method

The entails assembling and analyzing established standards in reference to:

- A. Physical Factors
- B. Design Criteria
- C. Development program

Time Requirement

Three months.

Staff Requirements

Two man-months will be required.

Date of Completion

June 1966

Cost

\$2,000

2-12 LAWS AND ORDINANCES

2-12-1 Analysis of Laws and Ordinances (70-73)

Objective

The objective of this step is to analyze existing laws and ordinances in order to determine the legal limitations and opportunities

Method

Determine deficiencies in all the existing laws and state enabling legislation; examine metropolitan Dade County's Home Rule Charter for legal limitations and opportunities, existing and possible. The findings of this step will have an important affect on planning proposals and implementation.

Time Requirement

Three months

Staff Requirement

2 man-months.

Date of Completion

December 1966

Cost

\$2,000.

2-13 CONTINUING PROGRAM

2-13-1 Evaluation of Organizational Requirements (43-57)

Objective

The objective of this step is to determine which local, State and Federal agencies will be vitally engaged in the transportation study on a continuing basis and what their interrelationship will be.

Method

Existing organizational patterns between local, State and Federal agencies will be re-examined and evaluated in order to determine the most effective route to cooperation on a continuing basis toward a mutually acceptable transportation planning program.

Time Requirement

Three months.

Staff Requirement

Two man-months.

Date of Completion

June 1966

Cost

\$2,000.

III. PLAN FORMULATION AND TESTING

3-1 FINANCIAL PROGRAM

3-1-1 Financial Program Development (69-72)

Objective

To develop detailed financial requirements, stage requirements, and develop a program to finance adequately the improvements that are required.

Method

This step will include the analysis of different financial programs that might be developed to provide the various improvements needed. Alternative programs for 1985 and 1975 will be evaluated and tested with policy makers in the county. A capital improvements program will be developed.

Time Requirements

Three months will be required.

Staff Requirements

Four man-months will be required.

Date of Completion

December 1966

Cost

\$4,000

3-6 LAND USE ACTIVITIES

3-6-1 Land Use Activities Forecast (27-38)

Objective

To produce forecasts of population, car ownership, income, employment and retail sales for the county at large by five-year intervals to 1985.

Method

Apply models to historical data to produce required forecasts. Output will be reviewed against comparable forecasts made by others for the county and for larger regions of which Dade County is a part.

Time Requirement

Three months.

Staff Requirements

Two man-months will be required.

Date of Completion

March 1966

Cost

\$2, 000.

3-7 TRANSPORTATION PLAN

3-7-1 Travel Forecast (39-45)

Objective

The objective of this step is to develop future traffic volumes, on the basis of the committed network so that the general scale of the traffic problem can be established.

Method

This step will involve the application of various models that have been developed to simulate transportation requirements based on 1985 population distribution, employment, income and car ownership.

Time Requirement

One month will be required for this work.

Staff Requirements

Accomplished by the State Road Department.

Date of Completion

April 1966

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

3-7-2 Assignment to Committed Network (45-51)

Objective

To assign traffic to the committed network.

Method

This phase of work will require assigning of all traffic volumes, developed in the preceding step, to the committed transportation network.

Time Requirement

Two months will be required for this work.

Staff Requirements

Accomplished by the State Road Department.

Date of Completion

June 1966

Cost

The cost of this step is covered by other than the 701 Urban Planning Assistance Program.

3-7-3 Determination of Deficiencies (51-63)

Objective

To establish deficiencies of the committed network.

Method

The deficiencies will be determined by assigning future traffic to the committed network, and analyzing deficiencies by selective link analysis or other appropriate techniques. Deficiencies will be determined on the basis of the carrying capacity of various transportation facilities.

Time Requirement

Two months will be required for this work.

Staff Requirements

Three man-months will be required. Most of this work will be accomplished by the State Road Department.

Date of Completion

August 1966

Cost

\$3,000.

3-7-4 New Forms of Transportation (45-62)

Objective

To determine what role new forms of transportation might play in the selected transportation network.

Method

This step will include a thorough review of all the technical data related to new forms of transportation that might be used to help overcome the present and future deficiencies in the area-wide transportation system.

Time Requirement

Four months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

August 1966

Cost

\$2, 000.

3-7-5 Development of Alternatives (63-74)

Objective

To assemble alternative plans to be tested and evaluated.

Method

This step will involve consideration of alternatives. This step will also evaluate preliminary plans for public transit, airports, water-ports and terminals facilities. A series of alternative transportation and land use plans for the area should be developed for preliminary review and testing until a satisfactory plan is developed which will meet the goals and desires of the area and still satisfy the transportation requirements. This coordinated effort between the state and the county will be based on evaluation by the technical advisory committee.

Time Requirements

Four months will be required for this work.

Staff Requirements

Six man-months will be required.

Date of Completion

December 1966

Cost

\$6, 000.

3-7-6 Transportation Plan (74-80)

Objective

Based on the preceding step several transportation plans will be selected for testing and evaluation. This selection will be made on the basis of the analysis of new forms of transportation, transportation deficiencies and planning principles and standards.

Method

This should be based on extensive discussion of the policy committee as well as the technical advisory committee. This too will be a joint operation between the state and county staffs. This step will primarily be one of a process of eliminating some alternative which need not be tested.

Time Requirement

Four months will be required for this work.

Staff Requirements

Four man-months will be required.

Date of Completion

April 1967

Cost

\$4, 000

3-7-7 Testing and Evaluating (80-86)

Objective

The objective of this plan is to test and evaluate selected alternative proposals until a satisfactory plan is developed which meets the goals and standards of the area.

Method

This step will be tied in closely with the preceding one. Actually one plan at a time will be tested and evaluated. Other plans may be conceived in light of those tests and will in turn be tested and

evaluated. This process is continued until a satisfactory plan is developed.

Time Requirement

Three months will be required for this work.

Staff Requirements

Twelve man-months will be required.

Date of Completion

July 1967

Cost

\$12,000

3-8 PUBLIC TRANSIT

3-8-1 Evaluation of O-D Data (65-71)

Objective

To evaluate the results of the travel model as it affects transit alternatives.

Method

Assemble pertinent projection data for use in formulating preliminary transit plans.

Time Requirement

Two months will be required for this work

Staff Requirements

This is to be accomplished by the transit consultant.

Date of Completion

October 1966

Cost

3-8-2 Formulating Plans (71-75)

Objective

The objective of this step is aimed at formulating of preliminary public transit plans.

Method

This step will state clearly the objectives of the preliminary public transit plans. A series of alternative concepts for the area should be developed around policies and goals established in the General Land Use Master Plan utilizing various transit devices.

Time Requirement

Two months will be required for this work.

Staff Requirements

This is to be accomplished by the transit consultant.

Date of Completion

December 1966

Cost

3-8-3 Financial Program (81-87)

Objective

Establish a financial program to meet requirements of the various alternative plans of the study.

Method

This step will entail the gathering of information on existing transit financial practices and will propose a financial program for various alternatives of public transportation plans.

Time Requirements

Three months will be required for this work.

Staff Requirements

This is to be accomplished by the transit consultant.

Date of Completion

July 1967

Cost

3-8-4 Report (87-92)

Objective

The aim of this Report is to express alternative preliminary public transit plans.

Method

The alternative schemes will be summarized and presented for evaluations in step(3-7-5).

Time Requirement

Three months will be required for this work.

Staff Requirements

This is to be accomplished by the transit consultant.

Date of Completion

October 1967

Cost

3-9 AIRPORTS

3-9-1 Projection of Aviation Activity (54-66)

Objective

To verify and consolidate information and project air activities.

Method

The projected air volume will be assembled and the data collected in reference to:

- A. Aircraft Operations
- B. Air Commerce
- C. General Aviation

This step will include information on additional airport requirements for Dade County by the year 1985.

Time Requirement

Two months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

August 1966

Cost

\$2,000.

3-9-2 Formulation of Plan for Airports (66-76)

Objective

The objective of this step is concerned with formulating of preliminary airport master plans.

Method

This step will state clearly the objective of the preliminary airport master plan as related to over-all public transit plans, local constraints, living patterns, attitudes, land use, and over-all transportation concepts. A series of alternative concepts for the area will be developed.

These should include the following:

A. Discussion of Each Existing and Proposed Airport Location to be Included in the Plan, Based on the Following Considerations:

1. Relationship to other existing and proposed airports
2. Meteorological data including wind rose
3. Compatibility of site to over-all community plan
 - a. Noise control measures
 - b. Land Use
 - c. Zoning
 - d. Convenience and accessibility

B. Formulation and Evaluation of Alternative Plans in Regard to:

1. Relationship to other airports
2. Meteorological data
3. Compatibility with the comprehensive development plan including factors of noise control, land use, zoning, convenience and accessibility.

Time Requirement

Four months will be required for this work.

Staff Requirements

Four man-months will be required.

Date of Completion

December 1966

Cost

\$4,000.

3-9-3 Financial Program (82-88)

Objective

It is necessary to establish a cost estimate for each alternative plan of the study.

Method

This step will recommend methods for financing various alternatives of the airport plan.

Time Requirement

Three months will be required for this work.

Staff Requirements

One man-month will be required.

Date of Completion

July 1967

Cost

\$1, 000.

3-9-4 Report (88-93)

Objective

This report will summarize the various plans for airport development for the area so that the advantages and disadvantages of various alternatives can be reviewed effectively in step (3-7-5).

Method

This step will be an objective attempt to state clearly the pros and cons related to the various alternatives from the standpoint of governmental constraints, living patterns, attitudes, land use, and a general transportation point of view.

Time Requirement

Three months will be required for this work.

Staff Requirements

One man-months will be required.

Date of Completion

October 1967

Cost

\$1, 000.

3-10 WATERPORTS AND WATERWAYS

3-10-1 Projection of Activity (55-67)

Objective

The objective of this step is to project waterports and waterways activities to the year 1985.

Method

This phase of the study will determine present and anticipated waterports and waterways activities including waterway travel forecast for the next twenty years.

Time Requirement

Two months will be required for this work.

Staff Requirement

Two man-months will be required for this work.

Date of Completion

August 1966

Cost

\$2, 000.

3-10-2 Formulation of Plans (67-77)

Objective

The objective of this step is to formulate alternative waterport and waterways master plans.

Method

This step is to state clearly the objectives of the preliminary waterport and waterways master plan for Dade County. Trade patterns, local constraints, land use limitations and accessibility will be taken into consideration. The waterport and waterway requirements will be projected and potentials for growth and expansion of existing or location of new waterport facilities in the study area.

Time Requirement

Four months will be required for this work.

Staff Requirement

Four man-months will be required.

Date of Completion

December 1966

Cost

\$4,000.

3-10-3 Financial Program (83-89)

Objective

The purpose of this step is to establish a cost estimate for each alternative plan.

Method

This step will recommend methods for financing various alternatives of the Waterport and Waterways Master Plan.

Time Requirement

Three months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

July 1967

Cost

\$2,000.

3-10-4 Reports (89-94)

Objective

This report will summarize the various concepts of development for the area so that the advantage and disadvantage of various alternatives can be reviewed effectively in step (3-7-5).

Method

This step will be an objective attempt to state clearly the pros and cons related to the various alternatives from the standpoint of governmental constraints, trade patterns, land use limitations and general transportation point of view.

Time Requirement

Three months will be required for this work.

Staff Requirements

One man-month will be required.

Date of Completion

October 1967

Cost

\$1,000

3-11 TERMINAL FACILITIES

3-11-1 Projection of Terminal Activities (56-68)

Objective

The purpose of this step will be to project future terminal activity for the various modes of transportation, based on economic studies, industrial growth potentials, location of proposed major industrial sites, and centers of employment and other activity. The traffic-generating aspects of future terminals will also be projected.

Method

On the basis of analysis of the operation of these facilities and past trends related to these facilities, projections will be made on total activity to 1985. This will be done on a zonal basis.

Time Requirement

Two months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

August 1966

Cost

\$2,000.

3-11-2 Summary of Alternative Plans (68-78)

Objective

In this step alternative plans will be prepared as preliminary terminal facilities master plans from which a final selection can be

made, or which will serve as a basis for formulation of a "compromise" plan. The alternative concepts should be tested to see how well they satisfy the goals and objectives determined for the provision of terminal facilities compatible with other elements of the transportation study.

Method

Objectives for terminal development should be translated into actual proposals for location, expansion, capacities, etc.

Time Requirement

Four months will be required for this work.

Staff Requirements

Four man-months will be required.

Date of Completion

December 1966

Cost

\$4,000.

3-11-3 Financial Program (84-90)

Objective

The purpose of this phase is to estimate the cost of each alternative plan.

Method

Information must be gathered and analyzed regarding financial resources and capabilities of private and public transportation agencies, terminal operators, and governmental units which will be directly concerned. Methods for financing various alternatives of the Terminal Facilities Plan will be recommended.

Time Requirement

Three months will be required for this work.

Staff Requirements

Two man-months will be required.

Date of Completion

July 1967

Cost

\$2,000.

3-11-4 Report (90-95)

Objective

The purpose of this report will be to summarize the various proposals for development so that the advantages and disadvantages of each can be reviewed effectively in step (3-7-5).

Method

A clear delineation of advantages and disadvantages of the various proposals must be arrived at in regard to financial feasibility, social factors, land use, patterns and pace of urban development, laws and governmental aspects, coordination with other elements of the over-all study, etc.

Time Requirement

Three months will be required for this work.

Staff Requirement

Two man-months will be required.

Date of Completion

October 1967

Cost

\$2,000.

IV. PLAN REVIEW AND ADOPTION

4-7 PLAN REVIEW AND ADOPTION

4-7-1 Plan Review and Adoption (86-91)

Objective

The objective of this step is to review and evaluate the plan finally selected as best by all agencies involved and recommend adoption by local governing authorities.

Method

The review will be done both formally and informally throughout the area. Formally through the Miami Urban Area Transportation Study Policy Committee and the Technical Advisory Committee and informally with the policy makers through conferences and public presentation. The Policy Committee will ultimately recommend adoption by the County Commission.

Time Requirement

Three months will be required for this work.

Staff Requirements

Eight man-months will be required.

Date of Completion

October 1967

Cost

\$8,000.

4-7-2 Report (91-96)

Objective

To prepare the report presenting the adopted transportation and land use plan for 1985.

Method

Close coordination will be required between consultants and agencies involved in preparing of report elements of the plan.

Time Requirement

Four months will be required for this work.

Staff Requirements

Sixteen man-months will be required.

Date of Completion

February 1968

Cost

\$16,000.

V. CONTINUING PROGRAM

5-13 CONTINUING PROGRAM

5-13-1 Develop Surveillance Program (79-85)

Objective

The objective of this step is to develop a surveillance program to conform to the Federal requirement that such studies as the one outlined shall be on a continuing basis.

Method

The method will be that of developing a land use data bank program which will be tied to the assessor's program. As part of this program, the following will be achieved.

- a. Uniform definitions and standards
- b. Methods of processing data
- c. Development of basic computer programs for storage and retrieval of data.

Time Requirement

Six months

Staff Requirement

Twelve man-months

Date of Completion

December 1966

Cost

\$15,000.

5-13-2 Surveillance Program (85-97)

Objective

The objective of this step is to carry out the program developed in the previous step in order to up-date the data.

Method

The annual up-date of the land use, population and economic data will include all the information that is required in the planning work and the land use and traffic models. The exact information that will be collected will change with the improvement of models and planning techniques. However, the significance of historical data will always be considered in this surveillance program. The program will try to monitor the growth of the area to detect significant changes in land use other than those perceived from model applications.

Time Requirement

Twelve months

Staff Requirement

Twenty-four man-months

Date of Completion

End of year

Cost

\$25,000 annually.

DIVISION OF RESPONSIBILITIES, PERSONNEL REQUIREMENTS AND COST

Figure V - Indicates the Division of Responsibilities for carrying out this Planning Program.

Figure VI - Gives a breakdown of personnel requirements by steps in the study design.

Figure VII - Shows the Budget by item of the program as outlined in this study design.

FIGURE V

RESPONSIBILITIES FOR VARIOUS PORTIONS OF WORK PROGRAM

		Metropolitan		
		Dade County	State Rd.	
		Planning Dept.	Dept.	Consultan
I.	Data Collection			
1-1	Financial Program			
	1-1-1 Manual on Financial Studies	X		
	1-1-2 Expenditure Patterns	X		
1-2	Government Goals and Factors - Laws and Ordinances			
	1-2-1 Manual on Governmental Goals	X		
	1-2-2 Social Institutions	X		
1-3	Social Factors			
	1-3-1 Citizen Survey Manual	X		
1-4	Economic Factors			
	1-4-1 Economic Factors Manual	X		
	1-4-2 Economic Trends	X		
1-5	Population Factors			
	1-5-1 Population Manual	X		
	1-5-2 Population Trends	X		
1-6	Land Use Activities			
	1-6-1 Land Use Manual	X		
	1-6-2 Update Land Use Trends	X		
1-7	Streets and Highways			
	1-7-1 Development of Street Network		X	
1-8	Public Transit			
	1-8-1 Transit Manual	X		X
	1-8-2 Development of Transit Network	X		X
	1-8-3 Conduct Transit Survey	X		X
	1-8-4 Code Transit Network	X		X
	1-8-5 Load Transit Network	X		X
1-9	Airports			
	1-9-1 Manual on Airports	X		
	1-9-2 Inventory of Aviation Activity	X		
1-10	Waterports and Waterways			
	1-10-1 Manual on Waterports and Waterways	X		
	1-10-2 Inventory of Existing Facilities	X		

FIGURE V (Continued)

		Metropolitan Dade County Planning Dept.	State Rd. Dept.	Consultant
1-11	Terminal Facilities			
	1-11-1 Manual on Terminals	X		X
	1-11-2 Inventory of Terminal Facilities	X		
1-12	Laws and Ordinances			
	1-12-1 Manual on Laws and Ordinances	X		
	1-12-2 Inventory of Existing Laws and Ordinances	X		
	1-12-3 Review of Laws and Ordinances	X		
1-13	Continuing Program			
	1-13-1 Requirements of a Continuing Program	X		
1-14	General Plan for County			
	1-14-1 Review of Plan Hearing	X		
	1-14-2 Plan Approval	X		
II. Analysis				
2-1	Financial Program			
	2-1-1 Financial Constraints	X		
2-2	Governmental Considerations			
	2-2-1 Functional Requirements	X		
2-3	Social Factors			
	2-3-1 Analysis of Attitudinal Survey	X		
2-5	Economic and Population Factors			
	2-5-1 Forecast Model	X		
2-6	Land Use Activities			
	2-6-1 Principles and Standards	X		
	2-6-2 Revised General Land Use Master Plan	X		
	2-6-3 Residential Model	X		
	2-6-4 Commercial Study	X		
2-7	Streets and Highways			
	2-7-1 Develop Travel Models		X	
	2-7-2 Check Models		X	
	2-7-3 Development of Committed Network	X	X	
2-8	Public Transit			
	2-8-1 Develop Transit Model		X	

FIGURE V (Continued)

			Metropolitan	State Rd.	
			Dade County	Dept.	Consultant
			Planning Dept.		
	2-8-2	Evaluation of Transit Service			X
	2-8-3	Transit Standards			X
	2-8-4	Determination of Role of Transit			X
2-9	Airports				
	2-9-1	Airport Requirements	X		
2-10	Waterports and Waterways				
	2-10-1	Waterport and Waterway Requirement		X	
2-12	Laws and Ordinances				
	2-12-1	Analysis of Laws and Ordinances		X	
2-13	Continuing Program				
	2-13-1	Evaluation of Organizational Requirements		X	
III. Plan Formulation and Testing					
3-1	Financial Program				
	3-1-1	Financial Program Development		X	
3-6	Land Use Activities				
	3-6-1	Land Use Activities Forecast		X	
3-7	Transportation Plan				
	3-7-1	Travel Forecast		X	
	3-7-2	Assignment to Committed Network		X	
	3-7-3	Determination of Deficiencies		X	
	3-7-4	New Forms of Transportation		X	
	3-7-5	Development of Alternatives		X	
	3-7-6	Transportation Plan		X	
	3-7-7	Testing and Evaluating		X	
3-8	Public Transit				
	3-8-1	Evaluation of O-D Data			X
	3-8-2	Formulating Plans			X
	3-8-3	Financial Program			X
	3-8-4	Report			X
3-9	Airports				
	3-9-1	Projection of Aviation Activity		X	
	3-9-2	Formulation of Plan for Airports		X	

FIGURE V (Continued)

			Metropolitan
			Dade County State Rd.
			<u>Planning Dept. Dept. Consultant</u>
	3-9-3	Financial Program	X
	3-9-4	Report	X
3-10	Waterports and Waterways		
	3-10-1	Projection of Activity	X
	3-10-2	Formulation of Plans	X
	3-10-3	Financial Program	X
	3-10-4	Report	X
3-11	Terminal Facilities		
	3-11-1	Projection of Terminal Activities	X
	3-11-2	Summary of Alternative Plans	X
	3-11-3	Financial Program	X
	3-11-4	Report	X
IV.	Plan Review and Adoption		
	4-7	Plan Review and Adoption	
	4-7-1	Plan Review and Adoption	X
	4-7-2	Report	X
V.	Continuing Program		
	5-13	Continuing Program	
	5-13-1	Develop Surveillance Program	X
	5-13-2	Surveillance Program	X

FIGURE VI

PERSONNEL REQUIREMENTS

		<u>Man-Months</u>
I.	Data Collection	
1-1	Financial Program	
	1-1-1 Manual on Financial Studies -----	2
	1-1-2 Expenditure Patterns-----	4
1-2	Governmental & Goals Factors Laws and Ordinances	
	1-2-1 Manual on Governmental Goals--- -----	-
	1-2-2 Social Institutions -----	4
1-3	Social Factors	
	1-3-1 Citizen Survey Manual -----	2
1-4	Economic Factors	
	1-4-1 Economic Factors Manual -----	2
	1-4-2 Economic Trends -----	3
1-5	Population Factors	
	1-5-1 Population Manual -----	2
	1-5-2 Population Trends -----	1-1/2
1-6	Land Use Activities	
	1-6-1 Land Use Manual -----	4
	1-6-2 Update Land Use Trends -----	8
1-7	Streets and Highways	
	1-7-1 Development of Street Network -----	-
1-8	Public Transit	
	1-8-1 Transit Manual -----	2
	1-8-2 Development of Transit Network -----	2
	1-8-3 Conduct Transit Survey -----	4
	1-8-4 Code Transit Network -----	2
	1-8-5 Load Transit Network -----	2
1-9	Airports	
	1-9-1 Manual on Airports -----	2
	1-9-2 Inventory of Aviation Activity -----	4
1-10	Waterports and Waterways	
	1-10-1 Manual on Waterports and Waterways -----	2
	1-10-2 Inventory of Existing Facilities -----	4
1-11	Terminal Facilities	
	1-11-1 Manual on Terminals -----	2
	1-11-2 Inventory of Terminal Facilities -----	4
1-12	Laws and Ordinances	
	1-12-1 Manual on Laws and Ordinances -----	1
	1-12-2 Inventory of Existing Laws and Ordinances -	2
	1-12-3 Review of Laws and Ordinances -----	1
1-13	Continuing Program	
	1-13-1 Requirements of a Continuing Program -----	2

FIGURE VI (Continued)

Man-Months

1-14	General Plan for County		
1-14-1	Review of Plan Hearing -----	-	
1-14-2	Plan Approval -----	-	
	Subtotal		68-1/2
II.	Analysis		
2-1	Financial Program		
2-1-1	Financial Constraints -----	2	
2-2	Governmental Considerations		
2-2-1	Functional Requirements -----	2	
2-3	Social Factors		
2-3-1	Analysis of Attitudinal Survey -----	4	
2-5	Economic and Population Factors		
2-5-1	Forecast Model -----	2	
2-6	Land Use Activities		
2-6-1	Principles and Standards -----	4	
2-6-2	Revised General Land Use Master Plan -----	4	
2-6-3	Residential Model -----	12	
2-6-4	Commercial Study -----	12	
2-7	Streets and Highways		
2-7-1	Develop Travel Models -----	-	
2-7-2	Check Models -----	-	
2-7-3	Development of Committed Network -----	2	
2-8	Public Transit		
2-8-1	Develop Transit Model -----	-	
2-8-2	Evaluation of Transit Service -----	-	
2-8-3	Transit Standards -----	-	
2-8-4	Determination of Role of Transit -----	-	
2-9	Airports		
2-9-1	Airport Requirements -----	2	
2-10	Waterports and Waterways		
2-10-1	Waterport and Waterway Requirements -	2	
2-12	Laws and Ordinances		
2-12-1	Analysis of Laws and Ordinances -----	2	
2-13	Continuing Program		
2-13-1	Evaluation of Organizational Requirements -	2	
	Subtotal		52
III.	Plan Formulation and Testing		
3-1	Financial Program		
3-1-1	Financial Program Development -----	4	

FIGURE VI (Continued)

		<u>Man-Months</u>
3-6	Land Use Activities	
3-6-1	Land Use Activities Forecast -----	2
3-7	Transportation Plan	
3-7-1	Travel Forecast -----	-
3-7-2	Assignment to Committed Network -----	-
3-7-3	Determination of Deficiencies -----	3
3-7-4	New Forms of Transportation -----	2
3-7-5	Development of Alternatives -----	6
3-7-6	Transportation Plan -----	4
3-7-7	Testing and Evaluating -----	12
3-8	Public Transit	
3-8-1	Evaluation of O-D Data -----	-
3-8-2	Formulating Plans -----	-
3-8-3	Financial Program -----	-
3-8-4	Report -----	-
3-9	Airports	
3-9-1	Projection of Aviation Activity -----	2
3-9-2	Formulation Plan for Airports -----	4
3-9-3	Financial Program -----	1
3-9-4	Report -----	1
3-10	Waterports and Waterways	
3-10-1	Projection of Activity -----	2
3-10-2	Formulation of Plan -----	4
3-10-3	Financial Program -----	2
3-10-4	Report -----	1
3-11	Terminal Facilities	
3-11-1	Projection of Terminal Activities -----	2
3-11-2	Summary of Alternative Plans -----	4
3-11-3	Financial Program -----	2
3-11-4	Report -----	2
	Subtotal	<u>60</u>
IV.	Plan Review and Adoption	
4-7	Transportation Plan Review and Adoption	
4-7-1	Plan Review and Adoption -----	8
4-7-2	Report -----	8
	Subtotal	<u>16</u>
		24
V.	Continuing Program	
5-13	Surveillance Program	
5-13-1	Develop Surveillance Program -----	12
5-13-2	Surveillance Program -----	24
	Subtotal	<u>36</u>
	TOTAL	240-1/

FIGURE VII
BUDGET SUMMARY

		<u>Cost</u>
I.	Data Collection	
	1-1 Financial Program	
	1-1-1 Manual on Financial Studies -----	\$ 5,000.
	1-1-2 Expenditure Patterns -----	2,000.
	1-2 Government Goals and Factors - Laws and Ordinances	
	1-2-1 Manual on Governmental Goals -----	-
	1-2-2 Social Institutions -----	4,000.
	1-3 Social Factors	
	1-3-1 Citizen Survey Manual -----	2,000.
	1-4 Economic Factors	
	1-4-1 Economic Factors Manual -----	2,000.
	1-4-2 Economic Trends -----	3,000.
	1-5 Population Factors	
	1-5-1 Population Manual -----	2,000.
	1-5-2 Population Trends -----	1,500.
	1-6 Land Use Activities	
	1-6-1 Land Use Manual -----	4,000.
	1-6-2 Land Use Trends -----	8,000.
	1-7 Streets and Highways	
	1-7-1 Development of Street Network -----	-
	1-8 Public Transit	
	1-8-1 Transit Manual -----	2,000.
	1-8-2 Development of Transit Network -----	2,000.
	1-8-3 Conduct Transit Survey -----	4,000.
	1-8-4 Code Transit Network -----	2,000.
	1-8-5 Load Transit Network -----	2,000.
	1-9 Airports	
	1-9-1 Manual on Airports -----	2,000.
	1-9-2 Inventory of Aviation Activity -----	4,000.
	1-10 Waterports and Waterways	
	1-10-1 Manual On Waterports and Waterways -----	2,000.
	1-10-2 Inventory of Existing Facilities -----	4,000.
	1-11 Terminal Facilities	
	1-11-1 Manual on Terminals -----	2,000.
	1-11-2 Inventory of Terminal Facilities -----	4,000.
	1-12 Laws and Ordinances	
	1-12-1 Manual on Laws and Ordinances -----	1,000.
	1-12-2 Inventory of Existing Laws and Ordinances -----	2,000.
	1-12-3 Review of Laws and Ordinances -----	6,000.

FIGURE VII (Continued)

		<u>Cost</u>
1-13	Continuing Program	
1-13-1	Requirements of a Continuing Program ----	2,000.
1-14	General Plan for County	
1-14-1	Review of Plan Hearing -----	-
1-14-2	Plan Approval -----	-
	Subtotal	<u>\$74,500.</u>
II.	Analysis	
2-1	Financial Program	
2-1-1	Financial Constraints -----\$	2,000.
2-2	Governmental Considerations	
2-2-1	Functional Requirements -----	2,000.
2-3	Social Factors	
2-3-1	Analysis of Attitudinal Survey -----	5,000.
2-5	Economic and Population Factors	
2-5-1	Forecast Model -----	2,000.
2-6	Land Use Activities	
2-6-1	Principles and Standards -----	4,000.
2-6-2	Revised General Land Use Master Plan ----	4,000.
2-6-3	Residential Model -----	12,000.
2-6-4	Commercial Study -----	12,000.
2-7	Streets and Highways	
2-7-1	Develop Travel Models -----	-
2-7-2	Check Models -----	-
2-7-3	Development of Committed Network -----	2,000.
2-8	Public Transit	
2-8-1	Develop Transit Model	-
2-8-2	Evaluation of Transit Service -----	-
2-8-3	Transit Standards -----	-
2-8-4	Determination of Role of Transit -----	-
2-9	Airports	
2-9-1	Airport Requirements -----	2,000.
2-10	Waterport and Waterway	
2-10-1	Waterport and Waterway Requirements ----	2,000.
2-12	Laws and Ordinances	
2-12-1	Analysis of Laws and Ordinances -----	2,000.
2-13	Continuing Program	
2-13-1	Evaluation of Organization Requirements ----	<u>2,000.</u>
	Subtotal	<u>\$53,000.</u>
III.	Plan Formulation and Testing	
3-1	Financial Program	

FIGURE VII (Continued)

	<u>Cost</u>
3-1-1 Financial Program Development -----	4, 000.
3-6 Land Use Activities	
3-6-1 Land Use Activies Forecast -----	2, 000.
3-7 Transportation Plan	
3-7-1 Travel Forecast	-
3-7-2 Assignment to Committed Network --	-
3-7-3 Determination of Deficiencies -----	3, 000.
3-7-4 New Forms of Transportation -----	2, 000.
3-7-5 Development of Alternatives -----	6, 000.
3-7-6 Transportation Plan -----	4, 000.
3-7-7 Testing and Evaluating -----	12, 000.
3-8 Public Transit	
3-8-1 Evaluation of O-D Data -----	-
3-8-2 Formulating Plans -----	-
3-8-3 Financial Program -----	-
3-8-4 Report -----	-
3-9 Airports	
3-9-1 Projection of Aviation Activity -----	2, 000.
3-9-2 Formulation of Plan for Airports --	4, 000.
3-9-3 Financial Program -----	1, 000.
3-9-4 Report -----	1, 000.
3-10 Waterports and Waterways	
3-10-1 Projection of Activity -----	2, 000.
3-10-2 Formulation of Plan -----	4, 000.
3-10-3 Financial Program -----	2, 000.
3-10-4 Report -----	1, 000.
3-11 Terminal Facilities	
3-11-1 Projection of Terminal Activities --	2, 000.
3-11-2 Summary of Alternative Plans -----	4, 000.
3-11-3 Financial Program -----	2, 000.
3-11-4 Report -----	2, 000.
Subtotal	<u>\$60, 000.</u>
IV. Plan Review and Adoption	
4-7 Plan Review and Adoption	
4-7-1 Plan Review and Adoption -----	8, 000.
4-7-2 Report -----	<u>16, 000.</u>
Subtotal	24, 000.
V. Continuing Program	
5-13 Surveillance Program	
5-13-1 Develop Surveillance Program -----	15, 000.
5-13-2 Surveillance Program -----	<u>25, 000.</u>
Subtotal	<u>40, 000.</u>
TOTAL	<u>\$251, 500.</u>

TOTAL STUDY COST

Salary Cost - related to above items	- - - -	\$251,500.
Administration and Supervision	- - - - -	54,500.
Detail Study Design	- - - - - - - - - - -	4,750.
Consultant Services	- - - - - - - - - - -	99,000.
Travel	- - - - - - - - - - -	1,000.
Publication	- - - - - - - - - - -	11,750.
*Other	- - - - - - - - - - -	13,821.
		<hr/>
	TOTAL	\$436,321

**ECONOMIC
POPULATION AND
LAND USE FACTORS FOR
TRANSPORTATION PLANNING**

**MIAMI URBAN AREA TRANSPORTATION STUDY
METROPOLITAN DADE COUNTY, FLORIDA**

transportation

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ECONOMIC, POPULATION AND LAND USE FACTORS
FOR TRANSPORTATION PLANNING

Prepared by

The Metropolitan Dade County Planning Department for
the Miami Urban Area Transportation Study
702 Justice Building
1351 N. W. 12 Street
Miami, Florida 33125

August 1969

The preparation of this report was financed in part through an urban planning grant from the Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954, as amended.

PREFACE

This is one of several background reports related to the inventory, analysis and projection of socio-economic characteristics within the context of the Miami Urban Area Transportation Study. MUATS is a joint effort of Metropolitan Dade County and the State of Florida in cooperation with the U. S. Department of Transportation's Bureau of Public Roads and the U. S. Department of Housing and Urban Development. Other reports in the background series provide data on community attitudes, regulatory measures, goals, means of implementation and continuing transportation planning. These background studies provide the basic inputs for the preparation of the principal elements of the MUATS program. These include metropolitan master plans for streets and highways, terminal facilities, airports, seaports and waterways, and mass transit.

The reports⁽¹⁾ present the findings of major study phases as they relate to the planning of all elements of transportation facilities in the Miami area and serve to advise the MUATS Technical Advisory and Policy Committees, and other concerned persons, of the technical details and analysis being conducted in the urban area transportation study by Metropolitan Dade County and its consultants.

Economic, Population and Land Use Factors for Transportation Planning combines reports on three of the work elements outlined in the detailed MUATS work program. These project elements are: economic factors, which provide an update of the 1959 economic base; population analysis, which provides for the analysis and projection of population for 1964, 1975 and 1985; and land use activities, which provides projection of certain land use in 1964, 1975 and 1985. The report describes the methods used in studying existing trends and in projecting those factors that were selected as independent variables in the gravity model. Findings of the various investigations are summarized.

(1) See Appendix C for a list of reports in this series.

BROWARD COUNTY
DADE COUN

WATER CONTROL
CONSERVATION AREA #3

TAMPAH

MUATS STUDY AREA

EVERGLADES
NATIONAL
PARK

RISCA YANE BAY
ATLANTIC OCEAN

DADE COUNTY
WHEEL COUNTY

1/4 INCH = 1 MILE
SCALE

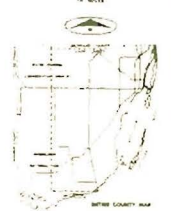


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THE BASIS FOR PLANNING

As is the case in most urban areas in the United States and elsewhere, the basic economic, demographic, and land use data required for the construction and manipulation of a mathematical transportation model simply has not been accumulated. For this reason, a great deal of improvisation and planning judgement on the basis of general local knowledge, is required in order to satisfy the computer's demands for data. Metropolitan Dade County's aggregate population figures, auto ownership, personal incomes and the like were easy enough to obtain. In most cases, time series for the variables in question were already in existence or could be constructed with relative ease. These aggregates are reasonably reliable.

Breaking these aggregates down into 550 traffic zones, however, is quite another matter.⁽¹⁾ Unfortunately, no time series exists by traffic zone. The decennial censuses comprise one of the best sources by small areas (census tracts) for some of the required data—population, dwelling units, employment, auto ownership, and so forth. But unfortunately, coincidence between traffic zone and census tract boundaries seemed to the data gatherer to be largely fortuitous. Metropolitan Dade County's 180 census tracts which were used in the 1960 survey had to be combined into 84 larger units in order to achieve boundaries that were approximately coterminous with traffic zone boundaries.

Despite these difficulties, Metropolitan Dade County is probably in a better position than most metropolitan areas with regard to the availability of the required data for transportation planning. Its Planning Department makes annual population studies based on certain elements of school enrollment, the increase or decrease in residential electric power customers, and data on the Cuban immigration obtained from authorities in the Cuban Refugee Center. An economic base study completed in 1959 contained aggregate data for several of the variables. Data from the highly detailed land use study conducted by the Planning Department in 1959 and 1960 was invaluable. However, use of this data introduced yet another set of planning units, for the land use data was assembled and the General Land Use Master Plan was constructed, in terms of urban cores, communities, and neighborhoods. Most of the land use

(1) See Appendix B

data had been translated on tapes into census tracts, and this data was enormously helpful. But again, the root problem of distributing county, census tract, community, or neighborhood aggregates among traffic zones was not substantially mitigated. An enormous amount of time was spent translating land use and other data from the various existing planning units into traffic zones.

Before the gravity model could be used to forecast the distribution of future vehicular traffic, it was necessary to correlate the existing pattern of vehicle trips—as indicated by the 5% origin and destination sample conducted in 1964—with certain variables that are logically related to trip generation. For this purpose, data was collected by traffic zone for a large number of variables. These variables were then tested in the model by means of regression analysis to find which variables were significant in "explaining" the various types of trips surveyed in the origin and destination sample. Variables for which traffic zone data was assembled are listed below:

. Population

Resident population
Peak tourist population
Total population (peak tourist plus resident)

. Dwelling units

Resident households
Hotel and motel units
Total dwelling units (resident plus tourist)

. Automobiles

Autos available to resident households
Autos per household

. Median family income

. School enrollment

Nursery
Kindergarten
Grades 1-6, 7-9, 10-12
College and other

- . Employment by industrial classification
 - Agriculture
 - Mining
 - Construction
 - Manufacturing
 - Transportation, communications, utilities
 - Wholesale trade, retail trade, finance,
insurance and real estate
 - Personal service
 - Amusement and recreation
 - Professional and related services
 - Government

- . Employment by retail classification
 - Building materials and hardware
 - General merchandise
 - Food
 - Auto dealers, service stations
 - Apparel and accessories
 - Furniture and home furnishings
 - Eating and drinking places
 - Miscellaneous retail stores

- . Total retail employment
- . Net residential acreage
- . Net non-residential acreage
- . Population per net residential acre
- . Employment per net non-residential acre
- . Resident labor force
- . Manufacturing floor area
- . Land area
- . Water area
- . Retail sales
- . Personal income

. Parks and open space

- Drive-in theaters
- Auditoriums
- Race tracks
- Stadiums
- Golf courses
- Marinas
- Swimming pools
- Public beaches
- Play fields
- Public parks
- Botanical gardens
- Zoological gardens

. Public bus trips

. Shopping center parking space

From the large number of variables for which data was collected or estimated for 1964, the following were selected to be used in the 1985 and 1975 MUATS models:

. Total population (including tourists)

. Auto ownership

. Labor force (place of residence)

. Employment

- Industrial, commercial, other
- Retail employment
 - Building materials and hardware
 - General merchandise
 - Food
 - Auto dealers, service stations
 - Apparel and accessories
 - Furniture and home furnishings
 - Eating and drinking places
 - Miscellaneous retail stores

. Dwelling units

- . Hotel and motel units
- . Shopping center parking space
- . Net non-residential acreage
- . School enrollment

Grades 7-9

Grades 10-12

College and other

THE FORECAST OF ACTIVITIES

The ways in which traffic zone data was obtained or produced for 1964 are described below, as are the methods and assumptions involved in projecting this data to 1985.

1964 RESIDENT POPULATION

Population by traffic zone for the spring of 1964 was obtained from the origin and destination survey conducted by the State Road Department and its consultant, Mel Conner and Associates. Total resident population as estimated from the 5% home-interview sample was 1,014,000; total population including tourists was 1,115,000; as the 1960 census population of Dade County was 935,000, the resident population for the spring of 1964 indicated an increase of only 79,000 or about 20,000 per year. This increase was way out of line with actual increases during the 1950's, when net immigration alone averaged about 34,000 per year. Although the Planning Department's population estimates for the early sixties indicated a slackening in the rate of growth experienced in the fifties, it did not seem reasonable that the reduction could have been so sudden and so great. The net effect of the Cuban in-migration which began in 1960 was somewhat uncertain, but it was known that about 82,000 Cubans had settled in Dade County between 1960 and June of 1964.

The peak tourist population indicated by the home-interview survey was also considered low—lower than even the most conservative of other estimates of peak tourist population. It was decided, therefore, that a downward bias had been introduced in some unknown manner into the survey data. Consequently, the 1964 population estimate by traffic zone was increased to coincide with the Planning Department's population estimate for 1964—1,091,000—a difference of about 77,000. This increase was distributed among the traffic zones so as to obtain a closer correspondence with census tract population estimates for 1963. These latter estimates had been made on the basis of 1960 census family factors and the Planning Department's continuing tabulation and analysis of county-wide building permit and demolition data.

1985 RESIDENT POPULATION

The Original Estimate

The problem in this phase of the study was to forecast total resident population and total tourist population in 1985 and distribute this population among the 550 traffic zones. Tourist and resident population estimates were made separately, and the present description is limited to the resident population of Dade County.

An aggregate population forecast for Dade County had been made as a part of the general land use and economic base studies that were completed in 1959. Trends in migration and natural population increase in prior years—especially the 1950's—were studied. On the basis of these trends, a fertility rate for future years was derived and the cohort-survival technique was used to project future natural increase. In like manner, net annual increase in migration for future years was estimated and projected. The two components were combined to produce projections for 1985 and intervening years. These projections were compared with other projections for the area in question and a 1985 population of 2.433 million became the official forecast.

In distributing this population to the MUATS traffic zones, it was assumed that all of this population would be contained within the boundaries of the urban area shown on the General Land Use Master Plan (GLUMP). The GLUMP was developed on a neighborhood, community, and urban core area principle. Saturation population capacities at desired densities were calculated for each neighborhood. Existing residential densities and zoning were studied and density ranges were developed for estate density (less than 1.9 dwelling units per acre), low density (2 to 12.9) medium density (13 to 35.9) and high density (40 or more). Total acreage and net residential acreage were calculated for each neighborhood. Density patterns were laid out for each neighborhood, using local knowledge and known factors of land developability such as accessibility, land elevation and quality, flood criteria, existing zoning, ownership patterns, and so forth. By selecting a specific density within each density range and scaling off the acreage in each density category, total dwelling units per neighborhood could be calculated. Family factors (persons per dwelling unit) were calculated for existing residential developments in each density category using 1960 census data. The number of dwelling units in each density category in each neighborhood was then multiplied by the corresponding family factor to obtain an estimate of saturation population (holding capacity at given densities).

At the time this portion of the MUATS was being carried out, the 1963 GLUMP was being revised. Consequently, certain changes had to be made. Among them were the following: deletion of population and residences in the southern portion of Key Biscayne, which was designated as a state park; adjustment of densities and land uses in urban renewal areas; deletion of anticipated development of Islandia. After these changes had been made, population saturation estimates for the 456 neighborhoods were completed.

Before these neighborhood populations and densities could be used to estimate traffic zone populations for 1985, another adjustment was necessary. As noted, the neighborhood populations developed in the GLUMP were saturation densities—that is, it was assumed that all land within the designated 1985 urban area would be fully developed at the indicated densities. In fact, the amount of developable land actually in use at any given time is a function of distance from the CBD. Therefore, a crude "ring" analysis was made using the MUATS home-interview traffic zone population data for 1964. The population density rings so obtained were expanded to accommodate the estimated 1985 population. It was assumed that the outer ring would be developed to about one-half its holding capacity and that the next ring would attain about three-fourths of its holding capacity. The GLUMP neighborhood population had been found to total 2.6 million, so the reduction in the outer rings was not redistributed.

After these adjustments had been made, the neighborhood populations were distributed among the traffic zones. The total came to 2,512,861. Zone populations were rounded to the nearest 100 and a factor was applied to reduce the total population to 2,433,000.

The Revised Estimate

By mid-decade, it had become apparent that the population forecasts made in 1959 needed to be revised downward. The Planning Department's annual population estimates, based on selected school enrollments and residential electric customers, clearly indicated that both the fertility and the net migration assumptions of the 1959 forecast needed to be revised. Natural increase had been projected on the basis of a natural increase of 13.8 per thousand, and an annual net in-migration of 35,000 had been assumed. Experience in the sixties indicated that net in-migration was averaging only 25,000 per year, and that natural increase had declined by 1967 to 5.2 per thousand.

For the revised projections, anticipated net in-migration was reduced to 30,000 per year through 1970, increasing to 35,000 in the 1980's. The rate of natural increase was reduced to 5.0 per thousand for the rest of the 1960's, increasing evenly to 8.0 in the 1980's (See Table 1).

Table 1

POPULATION PROJECTION

Dade County, 1967-1985

	June 30 Population	Net In- Migration	Natural Increase per 1,000	Natural Increase
1967	1,182,000	30,000	5	5,910
68	1,217,910	30,000	5	6,090
69	1,254,000	30,000	5	6,270
1970	1,290,270	31,000	6	7,742
71	1,329,012	31,000	6	7,974
72	1,367,986	31,000	6	8,208
73	1,407,194	31,000	6	8,443
74	1,446,637	31,000	6	8,680
75	1,486,317	33,000	7	10,404
76	1,529,721	33,000	7	10,708
77	1,573,429	33,000	7	11,014
78	1,617,443	33,000	7	11,322
79	1,661,765	33,000	7	11,632
80	1,706,397	35,000	8	13,992
81	1,755,389	35,000	8	14,394
82	1,804,783	35,000	8	14,799
83	1,854,582	35,000	8	15,208
84	1,904,790	35,000	8	15,619
85	1,955,409	35,000	8	15,619

Comments and Evaluation

Like most forecasts, the population projections above are based primarily on past trends. The most critical—and the most tenuous—assumption is that past trends will continue to prevail. In fact, the future is usually different in some significant aspects—especially the more distant future. The ordinary difficulties of population forecasting seem at present to be compounded in the Miami urban area by what appears to be the reversal of a trend. The long-term trend—from the early years of the century through the 1950's—shows population increasing at an increasing

rate. Estimates since the 1960 census indicate that population in the future may be expected to continue to increase, but at a decreasing rate. If this is true, then extrapolations of the historical growth curve will invariably overestimate future population. Tables 2 and 3 indicate that a reversal in the growth trend may be in process, in which case the population curve for Dade County will assume the S-curve that is typical of many social phenomena. Population estimates for Dade County at or near mid-decade vary considerably, but they are consistent in showing a marked decrease in the rate of growth. As a result, all of the estimates fall below what was considered a minimum estimate in the original (1959) Planning Department forecasts for 1965 (See Table 4).

It is possible that the apparent decline in Dade's rate of population growth is a result of the Cuban in-migration. In the past, in-migration from other Florida counties and from other states has accounted for 75-80% for Dade's population growth. It appears that the Cuban in-migration has practically dried up this source of net population increase. There simply is no way of estimating what the net migration rate will be after the Cuban influx has been halted.

Table 2

TOTAL POPULATION, DADE COUNTY

<u>Year</u>	<u>Population</u>	<u>% Increase</u>
1930	142,955	----
1940	267,739	87.3
1950	495,084	84.9
1960	935,047	88.9
1965	1,114,000	19.1

Source: U.S. Censuses, except 1965 which is the Metropolitan Dade County Planning Department estimate for that year.

Table 3

RECENT POPULATION ESTIMATES
DADE COUNTY, FLORIDA

<u>Agency</u>	<u>Date of Estimate</u>	<u>Population</u>	<u>% increase since 1960 census</u>
Mel Conner & Assoc., Inc.	Mar-April, 1964	1,021,000	9.2%
Bureau of the Census (provisional)	July 1, 1964	1,051,000	12.4%
Bureau of the Census (provisional)	July 1, 1965	1,064,000	13.8%
Dade County Planning Dept.	July 1, 1964	1,093,600	17.0%
Dade County Planning Dept.	July 1, 1965	1,114,000	19.1%
Bureau of Business and Economic Research, U. of Florida(1)	July 1, 1964 (revised)	1,075,500	15.0%
	July 1, 1965 (provisional)	1,089,200	16.5%

(1) Business and Economic Dimensions, Journal of the Graduate Faculty, College of Business Administration, University of Florida, Gainesville.

Table 4

PROJECTIONS OF THE POPULATION
OF DADE COUNTY

1960-1985
(000)

<u>Year</u>	<u>Maximum</u>	<u>Mid-Range</u>	<u>Minimum</u>
1960	959	952	943
1965	<u>1,243</u>	<u>1,201</u>	<u>1,142</u>
1970	1,548	1,467	1,357
1975	1,881	1,757	1,590
1980	2,250	2,079	1,845
1985	2,662	<u>2,433</u>	2,128

Source: Metropolitan Dade County Planning Department, Memorandum #2: "Population Projections," Economic Base Study, p. 14.

1964 TOURIST POPULATION

The 5% home-interview sample included a sampling of hotels, motels, rooming houses and apartments registered with the State Hotel and Restaurant Commission. Data collected in this sample included length of stay. This information made it possible to separate tourist or other transient population from permanent residents in these dwelling units. Transient population was arbitrarily identified with a duration of visits of less than six months. Total transient population at the time of the survey was estimated to be 101,600 on the basis of the 5% sample. As noted above, this estimate appeared unacceptably low when compared with other estimates.

Revision of the 1964 O and D Tourist Estimate

The following estimates of tourist population were developed in June 1964:

Table 5

TOURIST POPULATION, 1964

<u>1964</u>	<u>(Dade County)</u> <u>Average Level of</u> <u>Tourist Population</u>		<u>Total Tourists</u>	
Jan.	175,000	10.5%	350,000	8.7%
Feb.	200,000	12.1%	410,000	10.3%
March	178,000	10.7%	380,000	9.5%
April	126,000	7.6%	320,000	8.0%
May	110,000	6.6%	230,000	5.7%
June	119,000	7.2%	370,000	9.3%
July	140,000	8.4%	400,000	10.0%
August	129,000	7.8%	320,000	8.0%
Sept.	100,000	6.0%	290,000	7.2%
Oct.	115,000	6.9%	250,000	6.3%
Nov.	120,000	9.0%	280,000	7.0%
Dec.	<u>150,000</u>	<u>9.0%</u>	<u>400,000</u>	<u>10.0%</u>
	1,662,000	100.0%	4,000,000	100.0%
	(41.55%)			

Here, the Dade County average level of tourist population is 41.55% of total tourists. Note that the average level of tourist population reached its highest peak for the year with 200,000 or 12.1% of the total average level.

The following information is available from the Florida Development Commission 1964 "Tourist Study":

Table 6

1964 TOURIST ARRIVALS

(Airplane)

<u>Miami-Metro. Area</u>	<u>Ft. Laud.-Hwd.</u>	<u>West Palm Beach</u>
692,000	173,000	58,000

(Incoming Auto)

<u>Dade County</u>		<u>Ft. Laud.-Hwd.</u>	<u>West Palm Beach</u>		
Miami	1,352,869	Ft. Laud.	460,383	W.Palm Bch.	150,075
Mia. Bch.	371,937	Hollywood	214,454	Palm Beach	49,302
Homestead	30,903	Pompano Bch.	122,067	Delray	37,636
Coral Gables	24,157	Deerfield	17,036	Boca Raton	33,165
Hialeah	21,542	Hallandale	14,072	Boynton	14,565
				Riviera	13,965
	<u>(1,801,408)</u>		<u>(828,012)</u>		<u>(298,708)</u>
TOTALS					
REPORTED:	<u>2,493,408</u>		<u>1,001,012</u>		<u>356,708</u>
Percentage of Combined					
Total:	64.7%		26.0%		9.3%

The above data shows that only five of Dade's twenty-six active municipalities are reported for incoming auto, and no data whatsoever is included for train, bus or boat arrivals.

From the "Tourist Questionnaire Summary, Spring 1964," the following information is available:

<u>Mode of Travel, Spring 1964</u>	<u>Dade County</u>
Auto	44%
Airplane	41%
Train	13%
Bus	<u>2%</u>
	100%

Applying the 15% for train and bus arrivals to the total reported for Dade County in the 1964 tourist study, we arrive at the following conclusions:

Airplane and Incoming Auto	2,493,408	85.0%
Train and Bus	<u>440,013</u>	<u>15.0%</u>
Total Tourist Arrivals	<u>2,933,421</u>	<u>100.0%</u>

(5 cities only reporting for incoming auto)

Assuming that the percentage ratios worked out in the Interama letter data may also be applicable to other 1964 Dade total tourist estimates, we arrive at a total average tourist population level (41.55%) of 1,218,836 from the information above. Applying the peak average level ratio (12.1%) we arrive at a peak 1964 level of 147,479 for Dade County from this information. Nevertheless, since only five of Dade's twenty-six active municipalities are reporting, this figure should be considered low.

"The Impact of Airports on the Economy of Southeastern Florida" by Reinhold P. Wolff and Maja Slotta, Appendix Table 2, gives the following information on tourist arrivals in southeast Florida (3 counties):

1957	2,506,305
1958	2,248,520
1959	3,504,826
1965	3,788,400

(By arithmetic interpolation, 1964 tourist arrivals for southeastern Florida are computed at 3,741,138.)

It will be recalled from the Florida Development Commission 1964 Tourist Study that the percent of combined total tourist arrivals for Dade County constituted 64.7% of the three county total. Applying the 64.7% to the above 1964 figure yields 2,420,516 total tourist arrivals for Dade County. Using the 41.55% average level ratio yields 1,005,724 total average level of tourist population, and a peak average level (12.1%) of 121,693 for Dade County.

The various peak levels of tourist population made available from the above sources can be listed as follows:

<u>Source</u>		<u>Population Estimates</u>
Spring 1964 Duration Codes	—	101,583
Impact Airports, S.E. Florida	—	121,693
1964 Tourist Study	—	147,479
Interama Letter Data	—	200,000

It was stated earlier that the 1964 "Duration Codes," (six months or less), reflected a rather low figure when compared to average level estimates available from other sources. The above figures show this to be true. Comparison of Spring 1964 Duration Codes (six months or less) to hotel-motel units by traffic zones also shows this to be the case. Several examples also point to this conclusion.

The twenty traffic zones comprising the Miami CBD contain a total of 6,344 hotel-motel units for Spring 1964 as reported by the Florida Hotel and Restaurant Commission, compared to only 1,947 population (six months or less) as reported by the Spring 1964 duration code sampling process.

The seven traffic zones making up the Okeechobee Road approaches to the City of Miami show 309 hotel-motel units compared to a reported "duration code" population of zero.

The traffic zones to the north of Flagler Street and south of the Miami River total 408 units to only 182 population.

The three zones downtown, just west of the CBD contain 726 units and only 146 population.

Four zones directly north of the CBD show 1,003 units to 333 population.

One of the most significant comparison areas is the Miami International Airport area comprising five traffic zones with 1,449 hotel-motel units and a transient population of only 302 for Spring 1964.

It is apparent that much of the tourist population in these and other areas was lost in the one out of twenty sampling, and subsequent factoring-up processes.

After careful consideration, a middle-of-the road figure around 150,000 was decided upon as being perhaps the most accurate representation for the Spring 1964 peak level Dade County tourist population.

As the Spring 1964 "Duration Codes" (six months or less) constituted the only data available broken down by traffic zones for the Spring 1964 period, it was decided to accept this breakdown and factor each zone up accordingly to arrive at the 150,000 total for all zones. It was felt that even though many zones would still reflect low populations to units, acceptable factors for the total areas east of Biscayne Bay and the mainland could still be derived from the data. It was further felt that the method by which the 1985 projected population would be derived would serve to correct these discrepancies for the 1985 projection.

Initially, the MUATS Spring 1964 duration codes (six months or less) were compared zone by zone with the Hotel and Restaurant Commission runs of hotels-motels for Spring 1964. From this comparison, population per unit factors (transient occupancy) were obtained.

<u>Area</u>	<u>Spring '64 Hotel-Motel Units</u>	<u>Population Duration Codes (6 mos. or less)</u>	<u>Factor</u>
East of Biscayne Bay	44,346	128,162.4	= 2.8900
Mainland	<u>13,472</u>	<u>17,310.8</u>	= 1.2849
	(57,818)	(145,473.2)	

Note that both the total units and population used to derive the factors are less than the selected figures of 62,732 units and 150,000 tourist population for Spring 1964. Comparison of units to population zone by zone showed that 85.6% of the zones involved reported both units and population, while the remaining 14.4% of zones involved showed either units only or population only, and should be dealt with separately. Therefore, it was felt that the most accurate derivation of factors would more likely result only from those zones reporting both units and population. (The factors being derived to be used in projecting future population per hotel-motel unit only—tourists staying in rented private homes and rooms, staying with friends or relatives, short-term apartment rentals, etc. to be handled separately.)

Applying these factors to the net projected 1985 hotel-motel units (see next section) yields the following:

<u>Area</u>	<u>1985 Hotel-Motel Units</u>	<u>Factors</u>	<u>Peak 1985 Hotel-Motel Tourists</u>
East of Biscayne Bay	58,689	2.8900 =	169,614
Mainland	<u>28,180</u>	1.2849 =	<u>36,209</u>
	(86,869)		(205,823)

This would represent a 55,823 peak-level tourist population increase and would be reasonably in line with the 1985 projected increment of 24,137 new hotel-motel units for Dade County:

<u>Year</u>	<u>Peak Tourist Population</u>	<u>Total Hotel-Motel Units</u>	<u>Total Dade County Factor</u>
1964	150,000	62,732	= 2.391124
1985	205,823	86,869	= 2.369349

However, one problem raises itself at this point. The above 1964 "peak tourist population" figure of 150,000 includes those tourists staying in rented private homes and rooms, etc., while the above 1985 figure represents only "hotel-motel" tourists. The problem is further complicated by the fact that the above "Total Dade County Factors" are already essentially in agreement with one another.

This leads to the conclusion that one or both of the "First Factors" previously arrived at are too high for 1985 (east of Biscayne Bay and the mainland).

Subsequent discussions resulted in a careful re-evaluation of the factors derived for the areas east of Biscayne Bay and the mainland. The decision was made to adjust the Beach factor (east of Biscayne Bay) to a somewhat lower figure of 1.8900 for this area, with the mainland factor of 1.2849 (1.3 persons per unit) remaining acceptable. For projection purposes the 1985 peak tourist level was rounded off to an even 200,000.

This lowering of the Beach factor accomplishes two things. First of all, it reduces the 1985 "hotel-motel only" tourist population from 100.0% to 73.6% of the total tourist peak-level population. Secondly, it releases 52,866 or 26.4% of the peak level population that may now be used to represent tourists staying with friends and relatives, etc.

The statistical appendix of the Economic Base Study, Part One, page 199, Characteristics of Tourists, Dade County, 1954-55, by Type of Accommodation, lists 31.1% as staying in apartments, with friends and relatives, or in private homes. The remaining 68.9% stayed in hotels, motels, or other.

Those tourists staying in residential households with friends and relatives, making short-term rentals of private homes and apartments, renting rooms in private homes, etc. were distributed among all traffic zones according to "1985 Projected Residential Households," available from a separate projection. A total of 52,866 transients were so distributed. Total tourist distribution may be summarized as follows:

Tourists distributed by 1985 residential households	52,866	(26.4%)
Hotel-motel tourists distributed by factor (1.8900 per unit) to traffic zones east of Biscayne Bay	110,925	(55.5%)
Hotel-motel tourists distributed by factor (1.2849 per unit) to traffic zones on mainland	<u>36,209</u>	<u>(18.1%)</u>
Total 1985 peak level tourists distributed	200,000	(100.0%)

Summary and Conclusions

The peak level of tourist population in Dade County in 1985 is estimated at 200,000 with approximately 116,000 east of Biscayne Bay and 84,000 west of the Bay on the mainland. Approximately 147,000 will be occupying hotel-motel units with approximately 53,000 staying with friends and relatives, renting private homes and apartments on short-term lease, etc.

Broken down further, occupancy factors produced 110,925 staying in hotels-motels east of the Bay with 36,209 west of the Bay. A total of 52,866 were distributed countywide by 1985 residential households. Of these, 5,018 occupy zones east of Biscayne Bay with 47,848 west of the Bay on the mainland.

<u>Area</u>	<u>Projected Hotel-Motel Units 1985</u>	<u>Total Hotel-Motel Population 1985</u>	<u>Other Tourist Population 1985</u>	<u>Total Peak Tourist Population 1985</u>
East of Biscayne Bay	58,689	110,925	5,018	115,943
Mainland	<u>28,180</u>	<u>36,209</u>	<u>47,848</u>	<u>84,057</u>
	86,869	147,134	52,866	200,000
East of Biscayne Bay	67.6%	75.4%	9.5%	58.0%
Mainland	32.4%	24.6%	90.5%	42.0%
		73.6%	26.4%	100.0%

The following statements from the Economic Base Study (Part One, Basic Facts of the Dade County Economy, page 89) are still appropriate: "The objective measurement of the importance of the tourist industry is hampered by the physical difficulty of applying methods for quantitatively determining the number and characteristics of Dade's visitors. Because of the variety in modes of travel, places of accommodation, and spending patterns, no practical method of accurately counting visitors to Dade County or their economic influence has been devised. These determinations again are in the realm of the estimator and prognosticator."

AUTOS AVAILABLE TO RESIDENTS AND TOURISTS IN 1964

The O and D survey conducted by the State Road Department and its consultant collected data on automobile availability. No distinction was made between autos available to residents and transients. This data was processed to yield auto availability to residents of Dade County. If the person being interviewed had spent six of the previous twelve months in Dade County, he was classified as a resident.

AUTOS AVAILABLE TO RESIDENTS AND TOURISTS IN 1985

With resident and transient autos separated, it was then possible to project each of these components independently. Working with 1964 data on median family income and resident autos per

resident household, and households per net residential acre, curves were constructed relating income to autos per household, stratified by residential density. To minimize the effect of sampling error in the 5% O and D survey data, only those zones with approximately 1,000 or more autos were selected in developing the curves. There were 180 such zones. It was assumed that as real income increases, auto ownership increases—but not indefinitely. The projected curve was flattened out so that at the income levels forecast for 1985, autos per household had become a constant, even though incomes would continue to increase. From the General Land Use Master Plan four residential density categories were obtained—less than 2, 2 to 13, 13 to 36, and 36 or more residences per net residential acre. Curves were developed directly from the 1964 income and ownership data for the first three density categories. For the high density category, however, it was necessary to "peak out" the curve by introducing criteria for parking standards for high density apartment developments.

After the curves were developed, factors for autos per household for 1985 were read from them in accordance with projected values of median income and household density by traffic zone. Projections of median incomes were made by assuming a two per cent annual increase in real income. The median for the county in 1964 was \$4,800 per household. The projected median for 1985 is \$7,020. Median income projections for traffic zones were made in accordance with the 1964 distribution and the changes in this distribution that established trends and implementation of the General Land Use Master Plan might be expected to cause. Residential density projections were read directly from the General Land Use Master Plan. By multiplying the projected households per zone by the appropriate density-auto-ownership factor, total projected resident autos per traffic zone was obtained.

1985 Transient Autos

As for tourist-operated autos, it was found that zones that were primarily residential produced an average factor of 0.39 autos per non-resident. In those zones in which the tourist population was high, the factor was much lower, ranging from 0.11 to 0.28. In these areas the factors were averaged for small groups of zones or districts. Time series data which would have permitted an assessment of the effect of time on the factors developed was not available. Consequently, the factors were applied as derived. The tourist population projected by traffic zone for 1985 was multiplied by the corresponding factor to yield estimates of tourist autos per traffic zone.

Comments and Evaluation

The reliability of the total number of autos forecast for 1985 by the methods described above was checked against a projection of a time-series of total passenger car registrations in Dade County. The totals compare as follows:

Total autos, from derived curves	1,052,000
Total autos, trend line projection	<u>970,000</u>
Difference	82,000

LABOR FORCE

1964 Labor Force

The 1964 origin and destination survey obtained "addresses of employment," if any, for each person in the families interviewed, and classified these employees according to broad industry categories. Employment in Dade County, both by zone of residence and place of employment, were tabulated by traffic zone. However, in order to obtain total labor force, it was necessary to take unemployment into account. The Florida State Employment Service's estimate of unemployment at the time of the O and D survey was used to arrive at a labor force estimated by traffic zone.

The estimates of employment and labor force by traffic zone were aggregated for the industry categories used in the O and D survey. These were compared with employment data obtained from the Florida State Employment Service (FSES). Employment estimated with the 5% sample was adjusted to correspond with the FSES tabulations. Aerial maps and existing land use maps were used to assess the probable accuracy of the O and D estimates by traffic zones. Adjustments were made in those traffic zones in which the sampling variance was excessive. Employment by industry category was again totaled and further adjustments to traffic zones made on a pro rata basis to gain correspondence between the sample estimate and the FSES tabulations of employment.

1985 Labor Force

The initial step was to calculate labor force participation rates (per cent of population employed) in past years. The necessary data was supplied by the FSES for the years 1947 and 1964. These rates were plotted on log paper, and the basic historic trend

was extended to 1985. The projected participation rate for 1985 was multiplied by the projected 1985 population to obtain an estimate of total employment in 1985. It was assumed that unemployment would be 3½% in 1985. The total employment figure was increased to take this into account, producing total labor force.

To distribute the estimated 1985 labor among the traffic zones, it was assumed that 1964 participation rate would remain essentially the same to 1985—unless the character of land use in the traffic zone in question was expected to change significantly during this time. For those zones that were not populated in 1964, future development as shown on the General Land Use Master Plan was assumed and participation rates the same as those in existing similar zones were assigned and labor force was estimated.

EMPLOYMENT

1964 Employment

The 1964 origin and destination survey included employment information on occupants of those residences that were a part of the 5% sample. Employment of the persons being interviewed was coded by the interviewer into one of ten broad industry groups:⁽¹⁾

Code 0 - Agriculture, forestry, and fishing

Code 1 - Mining and mineral extraction

Code 2 - Construction

Code 3 - Manufacturing and processing

Code 4 - Transportation, communication, other
public utilities

Code 5 - Wholesale and retail trade, including
finance, insurance and real estate

Code 6 - Personal service

(1) See pp. 80-82, Procedure Manual 2B, Conducting a Home Interview Origin-Destination Survey, Bureau of Public Roads, Department of Commerce, 1954

Code 7 - Amusement, recreation and related services

Code 8 - Professional and related services

Code 9 - Government

Employment by traffic zone as determined from the 5% sample was aggregated into these ten categories. Category totals were checked against 1964 employment data furnished by the Florida State Employment Service (FSES).

Although the industry codes used in the sample were not identical with the Standard Industrial Classification (SIC) codes used by the Census Bureau, the Labor Department, and the Florida State Employment Service, it was nevertheless possible to check the O and D survey data against FSES data. Adjustments were made in category totals. Traffic zones were examined on existing land use maps and aerial photos. Obvious discrepancies in the sample data were corrected. Sample data totals were then made to agree with the adjusted totals by means of pro rata reductions or increases.

The State Road Department (SRD) also requested that total employment be aggregated in the following categories: "industrial" (mfg.), "commercial," and "other." For this purpose, the above industry codes were aggregated as follows:

Industrial - Code 3

Commercial - Codes 5, 7, 8

Other - Codes 0, 1, 4, 6, 9

However, neither these aggregates nor the industry code data produced satisfactory results in calibrating the gravity model, so the SRD and its consultant requested that they also be supplied with employment data in the following retail classifications:

Building materials and hardware

General merchandise - (department stores)

Food

Auto dealers, service stations

Apparel and accessories

Furniture and home furnishings

Eating and drinking places

Miscellaneous retail stores

Total retail employment

The employment data obtained from the home interview sample was useless for this purpose. So the SRD obtained a tape from the state agency that administers sales tax collections. This tape listed addresses of all retail establishments by SIC codes, and reported employment for each firm in terms of the following ranges: 0-3; 4-12; 13-20; 21-50; 51-100; 100-250; 251-500; 501-1,000; over 1,000. Each firm with a retail code was located and assigned to a traffic zone. Employment in the lower ranges was taken to be the mid-point of the range shown on the tapes. In the upper ranges, which are not too numerous in Dade, actual employment figures were obtained from the FSES Statistical Division. Employment was then aggregated in each traffic zone for each retail employment category; traffic zone totals were aggregated for each category and the totals in each category checked against the FSES control data and adjusted where necessary.

1985 Employment

Projections for 1985 of the various types of employment involved two major steps: projections of total employment by SIC categories and distribution of these totals among traffic zones. A step-wise ratio-trend approach was followed in projecting the totals for the SIC categories. Average monthly employment estimates from 1947 through 1964 as published by the FSES were the basic data for these forecasts.

The initial step was to project total labor force to 1985, as described in the section on labor force. The three components comprising total employment in the FSES data—agricultural employment, non-agricultural wage and salaried employment, and other employment—were then projected and adjusted to total 100 per cent. Then these major components were broken down into the industry codes used by FSES (manufacturing, contract construction, trade, government, etc.) by the same process. The next step was to group the elements so obtained so that they would correspond with the ten categories into which the home-interview data had been assembled by the SRD and its consultant. Because of arbitrary differences between the Bureau of Public Roads classifications and the Standard Industrial Classifications, a great deal of uncertainty was introduced into this

operation. Once this was done as best it could be, the ten categories were aggregated into three major groups: 1) manufacturing employment (code 3); 2) commercial employment (codes 5, 7, 8) and 3) other employment (codes 0, 1, 4, 6, 9).

Industrial

Code 3 - manufacturing and processing

Commercial

Code 5 - wholesale and retail trade, including
finance, insurance and real estate

Code 7 - amusement, recreation, and related
services

Code 8 - professional and related services

Other

Code 0 - agriculture, forestry (except logging)
and fishing

Code 1 - mining and mineral extraction

Code 4 - transportation, communication and
other public utilities

Code 6 - personal service

Code 9 - government

Having established controlling figures for 1985 employment, the next step was to make zone-by-zone estimates of 1985 employment in the required categories.

- 1) Manufacturing employment. In this category, zonal estimates were based on the following factors:
 - a. The existing level of manufacturing employment
 - b. Accessibility to population (labor force); for close-in zones, this factor was not considered very important.

- c. Access to rail, highway and water transportation facilities.
- d. Land values
- e. Availability of municipal services
- f. Available industrial land, according to the 1985 General Land Use Master Plan.

When estimates by traffic zone were totalled, they came to 117,500. These estimates were factored to agree with the exogenous estimate of total manufacturing employment - 134,900.

- 2) Commercial and other employment. Existing commercial employment by traffic zone (1964) was aggregated into 50 transportation districts and a households/commercial employee ratio calculated for each district. It was observed that these ratio's decreased as distance from the major CBD's increased. This is simply an expression of the fact that commercial establishments follow population growth. The observed ratios were expanded to cover the 1985 urbanized area as shown on the General Land Use Master Plan. Applying these ratio's to the 1985 dwelling unit forecasts, estimates of commercial employment for each district were obtained. These district estimates were used as bench marks when zone-by-zone estimates were made for commercial employment, retail employment and the desired sub-categories. "Other" employment was assumed to be largely a function of population and it was estimated at the same time as commercial employment. In making the zone-by-zone estimates, the following factors and relationships were considered:

- a. All commercial and "other" employment were assumed to be functions of population distribution in varying degrees.
- b. Retail activity is primarily a function of the distribution of population and purchasing power.

- c. Service employment is largely consumer-oriented and sensitive to population densities; it is also related to the level of non-service employment, as businesses also are a growing source of service employment. In residential areas, the income level of the resident population was found to be influential in determining the level of personal service (domestic) employment.
- d. Transportation employment is naturally closely related to locations of transportation terminals, manufacturing and wholesale activity.
- e. Amusement and recreation employment was found to be closely related to the level of tourist activity and, to a lesser degree, resident population.
- f. Government employment is to some extent in the nature of public service, such as fire, police and postal service employment; to this extent it can be related to population and business establishments (CBD's). Other than this, there seems to be little on which future government employment can be based.
- g. Professional and related services: existing employment in this category as indicated by the data from the 5% sample yielded no consistently discernible relationships. The only element which could be forecast with some confidence was the teaching profession. Forecasts of future school locations and their enrollments were the basis for these estimates.

When the individual zone estimates were totalled, this total was 321,300. Zone totals were factored to agree with the exogenous estimate of total commercial employment in 1985 of 360,300. The greatest disparity between the individually estimated zone totals and the exogenous employment

estimates was in the "other" employment category; here the total for individual zone estimates was only 242,500 while the overall estimate for this category was 399,300. In this category, some traffic zone estimates were re-examined and raised before factoring to the desired total.

Comments and Recommendations

The inherent difficulty of forecasting and distribution was unnecessarily compounded by the fact that the Bureau of Public Roads industry codes do not conform to the Standard Industrial Classifications published by the Bureau of the Census and used by local employment services all over the country. Comparisons of employment estimates derived from dwelling unit sample data with the data that has been gathered by the Census Bureau are often difficult, if not impossible. This lack of compatibility adversely affects the worth of the forecasts. The employment data obtained from the O and D survey should be a valuable source of small area (traffic zone) data on employment. As this data was collected in the MUATS origin and destination survey, its usefulness was severely restricted. It should be easily possible to aggregate retail employment, especially from the O and D data, as this data has repeatedly turned out to be an important variable in transportation studies. It should also be possible to segregate office employment, as this type of employment is critically important to the CBD and is an essential in forecasting future CBD employment.

DWELLING UNITS

1964 Dwelling Units

The SRD's origin and destination survey obtained samples from both tourist and residential facilities. It was known, however, that many apartments and hotels have a substantial proportion of their units rented to permanent residents. The distinction between residents and transients was therefore made on the basis of "duration of visit" rather than the character of the dwelling structure.

The estimate of total residential dwelling units in Dade County in 1964 was developed as a part of the process of revising the estimate of population obtained from the home-interview sample. Since "family factors" (average number of persons per dwelling unit) were used to arrive at the revised population estimate, the number

of dwelling units in each traffic zone was determined simultaneously.

1985 Dwelling Units

Average family size by census tract (1960) was studied and related to residential densities and distance from the Miami CBD. On the basis of this analysis, family factors were assumed for presently undeveloped or sparsely developed land. It was assumed that the character of the future residential development would be similar to some existing form, and that family factors would not undergo drastic change between the present and 1985. In most cases, zones in which high densities are anticipated were assigned a family factor of 1.5, while medium and low density areas were assigned family factors from 2.5 to 4.5, depending on other characteristics of the traffic zone and its environs.

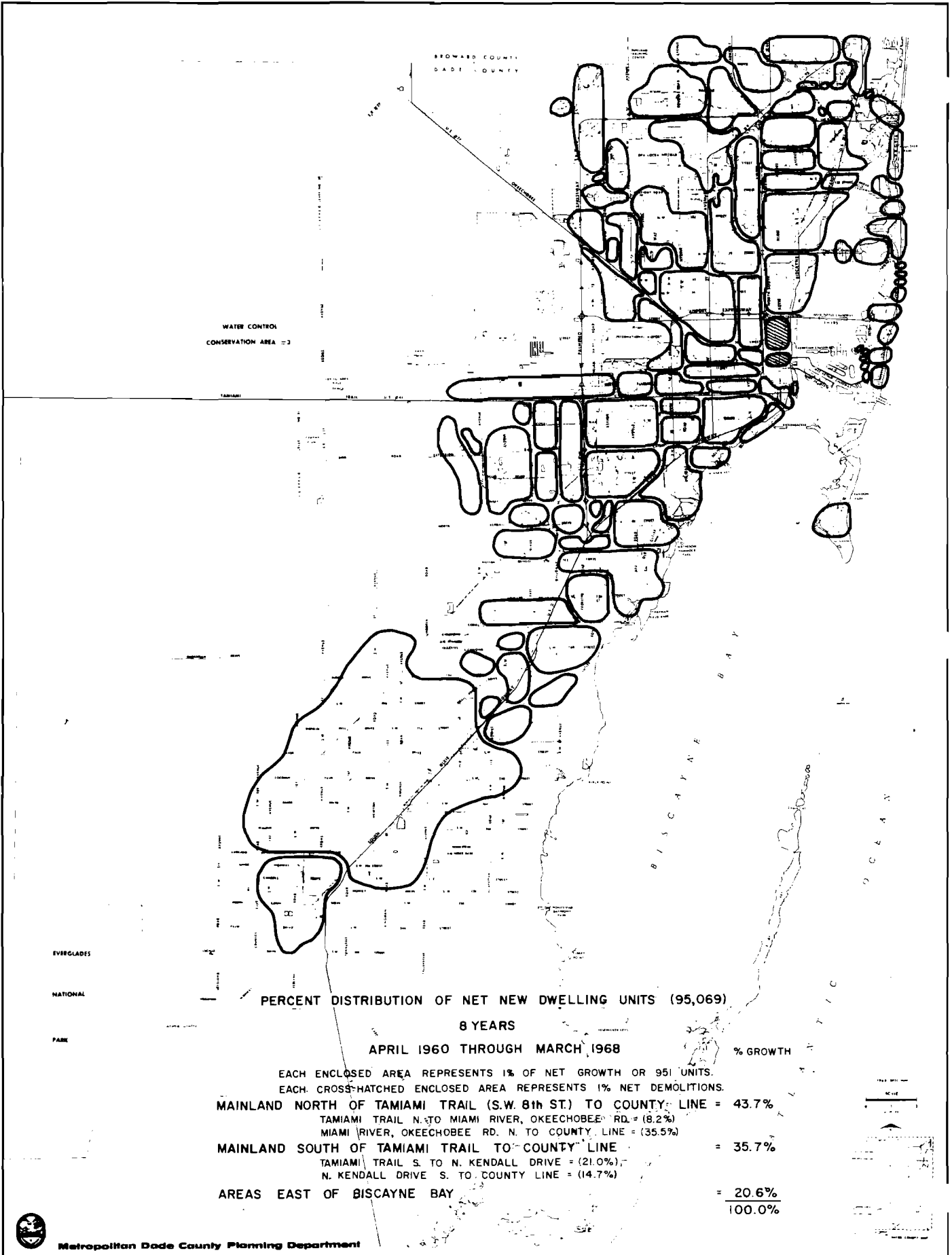
In those areas that are already developed, family factors derived from the O and D survey were used—with some modifications based on census data in zones where the family factor derived from the O and D survey was not credible.

Once family factors had been determined for both developed and undeveloped traffic zones, the zone population was divided by the family factor to obtain number of dwelling units.

It is interesting to note that in spite of the larger amounts of vacant land available in the southern and less developed parts of the county, most of the dwelling units constructed between 1960 and 1968 have been put up in already developed parts of the county—the northern urban cluster, including Miami Beach. Of the estimated 95,069 dwelling units constructed in Dade County between 1960 and 1968, 75,485, or 64.3 percent, were built in areas north of the Tamiami Trail (S. W. 8 Street) including Miami Beach. Only 19,584, or 20.6 percent were built in areas south of the Tamiami Trail, in spite of the greater availability of cheaper land. This reflects the desire of people to live in areas convenient to their places of work, shopping and recreation; and which have the most effective transportation facilities (See map on page 30)

1964 Hotel and Motel Units

The expanded five percent sample data on hotel and motel units was found to contain an unacceptably high degree of inaccuracy. Consequently, the Florida Hotel and Restaurant Commission listing (from which the five percent sample was taken) was used instead. Using Sanborn-Hopkins plat books, aerial photographs and a large



county map showing traffic zones, the hotels and motels shown on the Commission's list were assigned to traffic zones and totaled.

1985 Hotel and Motel Units

A block by block analysis of the area east of Biscayne Bay was carried out. The Commission list showed that, in 1964, this area contained about 71 percent of all hotel-motel units. It was assumed that the development of Interama would have an important effect on hotel-motel development in adjacent areas and on existing hotels and motels as well. It is also assumed that most of the older hotels in Miami Beach from approximately 8th Street south—from ocean to bay—will undergo renewal. Some will be replaced by luxury-type hotels. Similar changes will occur north of this area along Ocean Drive to around 15th Street.

In addition, the following factors were taken into account in making projections of hotel-motel units to 1985:

- a. The 1985 Approved General Land Use Master Plan.
- b. The amount of available vacant land remaining.
- c. The proposed 1985 generalized zoning map of Dade County.
- d. The shift to more multi-story tourist accommodations as land costs rise.
- e. Existing hotels and motels
- f. The present age of existing hotel-motel accommodations.
- g. The proposed application for urban renewal in the south beach area. This area will extend from approximately 8th Street to the southern land extremity, and from the ocean to the bay.
- h. Estimated holding capacities and current land uses of each block under analysis. (1985 hotel-motel unit projections would not necessarily equal estimated holding capacities for tourist accommodations in each block.)

Projected units for 1985 were estimated by traffic zone. Each block was then re-studied at a later time and refinements made where necessary. Special care was given to Fisher's Island, Key Biscayne, and the proposed south beach urban renewal areas. The Approved 1985 General Land Use Master Plan designates all of the southern portion of Fisher's Island for tourist uses. In this respect, it was felt that no less than two Fontainebleau-type structures in the next twenty years could fulfill the projected estimate of 2,000 units. Much the same thinking was applied to the oceanfront areas of Key Biscayne south of Crandon Park and north of Cape Florida State Park. Existing hotel-motel structures in this area tend to be smaller and will probably continue to share this beachfront with new high-rise type residential apartment buildings. By this method, total growth in hotel-motel units east of Biscayne Bay between 1964 and 1985 was estimated at 14,251 additional units—a 32.1% increase.

The remainder of Dade County was then studied by dividing the county into 25 different areas and handling each area separately. Since Hopkins and Sanborn plat books do not include all of these areas, more reliance was placed upon a detailed analysis using the available General Land Use maps. By placing traffic zone overlays over these maps, the 25 areas could be carefully evaluated as to their current land uses, hotels or motels presently within the individual zones, anticipated development as per the 1985 General Land Use Master Plan, available land remaining, and all other pertinent factors. By this method, hotel-motel holding capacity was estimated and judgments were made as to how much of this capacity would be used by 1985. On the mainland several distinct considerations were applicable. The traffic zones around the International Airport could expect increasing growth in hotel-motel units. The Terminal building zone itself would receive an additional one to two hundred new hotel units based upon current expansion plans already discussed in local newspapers. The proposed new Merchandise Mart near the airport has plans for a 1,000 unit hotel facility at this time. Approaches to the city, such as Tamiami Trail, Okeechobee Road, South Dixie Highway and Biscayne Boulevard could reasonably expect continued hotel-motel growth to the extent that vacant land, zoning and proposed land-use will allow such growth. It is anticipated that there will be some activity in the Brickell, South Bayshore and upper Dixie Highway areas. Also, Interama may induce construction of 2,500-2,700 new units throughout the northern portions of the county.

The CBD also received special consideration. Some prime vacant lands exist on and about the Florida East Coast Railway site for which it was felt that some future projection should be made. Along Biscayne Boulevard in the CBD and just to the north, old

buildings and structures exist which, if trends of the past few years continue, will possibly be replaced with large high-rise type downtown hotel structures similar to the existing Everglades, Columbus, McAllister, and Biscayne Terrace hotels.

Other well defined areas, such as Doral, Homestead, Hialeah, Flagler Street, expressway areas, Black Point, Bird Road and the downtown urban renewal areas were each studied individually with major emphasis placed upon their current existing land uses and proposed land uses consistent with the 1985 General Land Use Master Plan.

In all, the traffic zones making up the mainland areas add up to a total projected increment of 9,886 units, or a 54.0% increase over Spring 1964. This may appear to be an excessive increase until the impact of the proposed Merchandise Mart, Interama, the airport and the CBD are considered. These alone add up to an estimated 5,822 new projected units, leaving only 4,064 projected increment for the remainder of the mainland.

Conclusions and Comments

The total results add up to an estimated 14,251 new units for the areas east of Biscayne Bay and 9,886 for the mainland, or a total increment of 24,137 new units for Dade County from 1964 to 1985. Added to the 62,732 units already existing in Dade County in Spring 1964, this gives a total 1985 projected hotel-motel figure of 86,869 units or a 38.5% increase over 1964. Of these, 58,689 will be in traffic zones east of Biscayne Bay and 28,180 units will fall on the mainland. Of those east of the bay, the City of Miami Beach will account for 41,392 units, an increase of 8,240 over its present 33,152 units.

The attached table of hotel-motel "rooms" and "units" 1946-1966 for Dade County, Florida serves to convert "rooms" to "units" by arithmetic interpolation as of March of each year for projection line purposes. (Beginning July 1959 the method of reporting hotels and motels by the Florida Hotel and Restaurant Commission was changed from number of rooms to number of units.)

Using the "least squares" method for computing trend lines, a trend line figure of 105,451 combined hotel-motel units was arrived at for 1985. A least squares trend line drawn for the City of Miami Beach only, using historical data supplied by the City of Miami Beach Building Department, arrives at 45,184 combined hotel-motel units for 1985.

Table 7

HOTEL-MOTEL UNITS BY AREA, 1964

<u>Area</u>	<u>Hotel-Motel Units Spring 1964</u>	<u>(Increment) Proposed Addnl. Hotel-Motel Units 1964-1985</u>	<u>(Net) Projected Hotel-Motel Units-1985</u>
City of Miami Beach	33,152	8,240	41,392
Remainder east of Bay	<u>11,286</u>	<u>6,011</u>	<u>17,297</u>
(Total east of Biscayne Bay)	(44,438)	(14,251)	(58,689)
Mainland	<u>18,294</u>	<u>9,886</u>	<u>28,180</u>
(Totals)	<u>(62,732)</u>	<u>(24,137)</u>	<u>(86,869)</u>

However, further analysis shows it to be highly unlikely that such figures could be attained by 1985. Several considerations lend themselves to this conclusion. Available vacant land is becoming increasingly scarce, especially on the beach. From 1956 to 1959, overbuilding of tourist accommodations took place in Dade County. The disastrous winter of 1959, along with a crippling airline strike and hurricane served only to compound the difficulties due to overbuilding in previous years, sending many hotels into bankruptcy and causing a general leveling off of hotel-motel construction during the following five years. Between 1960 and 1965 there were three years ('60, '61 and '63) in which there were no reported building permits for hotel-motel construction in the City of Miami Beach. In the past five years (1961-1965) only 495 new hotel-motel units have been added to all of Dade County. As the industry re-adjusted itself, occupancy rates and hotel receipts tended to rise. The following table shows occupancy rates in Miami Beach hotels from 1959-1965: (source - Horwath and Horwath, Trend of Business in Florida Hotels, 1965 and prior years, Table 9)

Per Cent Occupancy

<u>Year</u>	<u>February</u>	<u>August</u>
1962	93	55
1963	94	67
1964	94	66
1965	97	76

Hotel Receipts and Hotel Construction in Miami Beach 1954-1963
(Table 8 - Horwath and Horwath)
(Constant 1958 Dollars)

<u>Year</u>	<u>Hotel Receipts</u> <u>(1000's)</u>	<u>Hotel Construction</u> <u>Expenditures (1000's)</u>
1954	\$70,570	\$5,886
1958	92,332	2,994
1963	98,779	-0-

Source: City Records - U. S. Bureau of Census, Census of Business, Selected Services Receipts, Florida, 1963 and prior years. (From Economic Survey of Miami Beach, prepared by R. Davenport Associates, Inc., January, 1966.)

"From the above tables, it is safe to say that if occupancy rates continue to increase as they did in 1962 to 1965, and if hotel receipts continue to increase as they did in the 1954 to 1963 period, there will be an upturn in construction expenditures for hotels in Miami Beach, all other things being equal." However, there will continue to be more of a shift to the mainland, Broward County and Caribbean areas as the supply of available vacant land on the beach is exhausted.

The following statement was taken from the Economic Base Study - Summary Report, page 15 (December, 1960):

"Tourism, for instance, which now contributes 20.4% of foundation income should grow in the future, for we have every reason to believe that penetration into new markets, development of convention business, accepting and utilizing the Caribbean as a complementary rather than a competitive area - all of these can enhance Dade's importance as a tourist center. But growth through these media cannot be great enough to allow tourism to maintain its present share in the economy."

Specifically, it would seem that emphasis in the coming decade should be placed on development of additional tourist attractions with decreased emphasis on the construction of accommodations.

SCHOOL ENROLLMENT

1964 School Enrollment

School enrollment data was tabulated in seven categories: nursery (under five years old), kindergarten (five year olds), first through sixth grade, seventh through ninth grade, tenth through twelfth grade, college, and other schools. "Other" schools include classes in agriculture, aviation, beauty culture, business, adult education, real estate, modeling, dancing, art, music, language, medicine, driving, community development, special classes in reading for the emotionally disturbed, and special classes for the physically handicapped. Seminaries are also included.

Enrollment data was obtained from the Dade County Board of Public Instruction and the Catholic Diocese Chancery Education Department for first through twelfth grades as well as some of the colleges, kindergartens, and other schools. Questionnaires were mailed to all schools listed in the yellow pages under the following classification of schools:

Private	Business	Art
Printing	Bridge	Drama
Modeling	Real Estate	Aviation
Medical	Day	Beauty Culture
Language	Water Skiing	Auto Driving
Kindergarten	Day Nurseries	Music
Florist	Navigation	Dancing
Engineer	Trade	
Electronics	Barber	

A total of 384 questionnaires were mailed October 7, 1965. By October 25, 162 replies had been received, of which 134 were responses and 28 were returned by the post office department because the schools had gone out of business or moved without leaving a forwarding address.

Once the school population had been determined, enrollment figures were standardized. Schools were then assigned to traffic zones and the enrollment figures were tabulated.

1985 School Enrollment

The General Land Use Master Plan (GLUMP) projects land use and population distribution on a neighborhood-community basis. Future (1985) public school needs for each community were estimated and approximate school locations recommended. The proposed school sites were located by traffic zone and the estimated enrollments were tabulated by traffic zone in the categories described above.

Probable college enrollments in 1985 were obtained from officials of the institutions involved.

Institution

University of Miami	15,000
Biscayne College	1,500
Barry College	3,500
Florida Memorial College	---
Miami-Dade Junior College	45,600

The estimate for Miami-Dade Junior College was made as follows: in 1964, 66 percent of the high school graduates went to college; of this 66 percent, 54 percent registered at Miami-Dade. If the same percentages prevail in 1985, about 11,000 students will be entering Miami-Dade as freshman in 1985. In 1964, 75 percent of the freshman entered college for the first time. If this percentage holds to 1985, there will be about 14,800 freshmen in 1985. These freshmen make up 50 percent of the 29,600 students going to college for credit. If this proportion still holds in 1985, total Miami-Dade enrollment will be 45,600, split evenly between the north campus and the south campus.

As for "other" schools in category 3, it was assumed 1) that enrollment in adult education classes would stay proportionately about the same as it was in 1964 (an average of 350 students per senior high school), 2) that new dancing classes, beauty schools, and commercial business schools would continue to be located mostly in shopping centers and would draw, on the average, about 200 students per shopping center. This projection of enrollment in new schools was added to projections of enrollment in existing schools of these types.

SHOPPING CENTER PARKING SPACE

1964 Shopping Center Parking Space

Shopping center data, including parking space, was developed as a part of the Planning Department's general land use study in 1959-60. Data on new centers was tabulated.

1985 Shopping Center Parking Space

Since most shopping centers are planned with a current excess of parking space to take care of future growth, it was assumed that parking space for existing centers would remain essentially the same to 1985. The problem was then to forecast the sizes and locations by traffic zone of future shopping centers.

The following existing shopping centers were selected as a representative sample in which sales space and parking space could be correlated:

Table 8

SHOPPING CENTER PARKING SPACE, 1985

<u>Name</u>	<u>Sales Space in Sq.Ft.</u>	<u>Parking Space in Sq.Ft.</u>
1. Northside Center	500,000	1,200,000
2. Palm Springs Mile	445,000	800,000
3. Biscayne Shopping	300,000	900,000
4. Central Plaza	209,000	500,000
5. Jefferson's and Kwik Chek	170,650	623,350
6. Westchester Center	125,000	450,000
7. Norwood (Fredrich's)	57,000	80,000
8. Honey Hill	50,000	150,000
9. University Shopping	48,000	76,000
10. 8th Street Shopping	21,000	36,000
11. Leisure City	17,000	34,000
12. 61st Street Shopping	16,000	16,000
13. Sunset Corners	12,000	24,000

Employment data from the home-interview sample was extracted for the zones in which these shopping centers are located and compared with retail work trip ends terminating in each zone. Trip ends were then compared with retail employment data obtained from the Florida State Employment Service. Results of these comparisons are shown in the following table.

Table 9

SHOPPING CENTER EMPLOYMENT AND TRIPS

<u>Shopping Center</u>	<u>Traffic Zone</u>	<u>Based on 5 Per Cent Sample</u>		<u>Florida State Employment Service Retail Employees</u>
		<u>Commercial & Related Emp.</u>	<u>Trip Ends</u>	
<u>REGIONAL:</u>				
Northside Center	125	1,682*	1,615	1,743
Westchester Center	374			
	378			
	379	1,333	497	508
Biscayne Shopping Plaza	143	1,184	826	793
Palm Springs Mile	236	1,152	609	492
<u>COMMUNITY:</u>				
8th Street Shopping	336	830	245	408
Central Plaza	309	748	619	834
61st Avenue Shopping	318	684	236	299
Jefferson & Kwik Chek	421	565	294	435
University Shopping	362	456	No data	304
<u>NEIGHBORHOOD:</u>				
Sunset Corners	386	144*	No data	90
Leisure City	489	103	74	22
Honey Hill	194	88	49	52
Norwood Center	198	58	No data	85

* Commercial Only

On the basis of these comparisons and the commercial standards set out in the General Land Use Master Plan, the following data was developed as being typical for future shopping centers:

Table 10

SHOPPING CENTER STANDARDS

<u>Type of Shopping Center</u>	<u>Retail Sales Space (sq.ft.)</u>	<u>Retail Employment</u>	<u>Parking Space (sq.ft.)</u>
Neighborhood	50,000	100	90,000
Community	150,000	500	270,000
Regional	400,000	1,200	720,000

Parking recommendations of the Urban Land Institute have been adjusted to fit local conditions. Six car spaces have been allowed for each 1,000 sq.ft. of sales space, with 300 sq.ft. being allowed per car (1,800 sq.ft. of parking space for each 1,000 sq.ft. of sales space). Standards for commercial development as enumerated in the General Land Use Master Plan have been followed throughout (See Appendix A).

NET NON-RESIDENTIAL ACRES

1964 Net Non-Residential Acres

Non-residential acreage is land used for something other than residential use, such as industry, business, tourist, or institutional, but does not include land used for streets, water-courses, parks, golf courses, cemeteries, farm lands, undeveloped land, and the like.

Residential and non-residential acreages from the land use study had been recorded by census tract in 1962. These acreages were adjusted in accordance with an existing land use map which had been kept current by means of a continuing countywide analysis of building permits and demolitions. Estimates based on visual inspection of the land use map were made in order to distribute census tract acreages among the component traffic zones. These estimates were adjusted where necessary so that total acreage by traffic zone was the same as the total acreage by census tract.

1985 Net Non-Residential Acres

It was assumed that practically all of the estimated 1985 population would be living within the boundaries of the urbanized area as indicated by the General Land Use Master Plan.

Projected employment data for each traffic zone was estimated by developing average employment per acre figures for the different types of employment (industrial, commercial, etc.). Projected employment by traffic zone in each category was divided by the corresponding standard to derive acreage required for these non-residential uses.

Detailed tables which show net-residential acreage by traffic zone, district and total study area are shown in Appendix B.

THE FORMULATION OF PLANS

One of the most important factors affecting traffic generation is land use. Apartment complexes, shopping centers and public buildings generate large volumes of traffic; single family residential areas generate less traffic. It is therefore necessary to determine future traffic generation from future land use plans, because the future travel patterns in Metropolitan Dade County are a function of the manner in which different human activities are distributed. Once this has been done, it is then possible to determine the required transportation facilities.

Basic data regarding existing travel patterns within the metropolitan area was collected by the Florida State Road Department through its origin-destination survey in the spring of 1964. The survey gathered facts on the movement of people within the study area by all modes of travel for a typical weekday. Beginning in February 1965, information was gathered by the Metropolitan Dade County Planning Department on population, employment and related socio-economic characteristics. The data was tabulated for traffic zones delineated for the MUATS area. This detailed information became the basic inputs or control factors which provided the basis for planning the comprehensive transportation system.

When the future travel patterns and the socio-economic activity were analyzed and compared, projections of future patterns of activity, such as where people will work, live, shop and play were converted into future travel demands. These demands were then tested against transportation needs and plans were prepared based upon these results.

The purpose of this phase of the MUATS work program was to project activities in 1964, 1975 and 1985 for traffic zones used in connection with traffic forecasts. To meet the requirements of the MUATS forecast of activities it was necessary to collect new land use information and project it to 1975 and 1985. The General Land Use Master Plan study included a detailed inventory of existing land use for the metropolitan area. This new information was largely related to employment distribution throughout Metropolitan Dade County.

The following outline shows the general procedures and methods used in developing the forecast of land use activities:

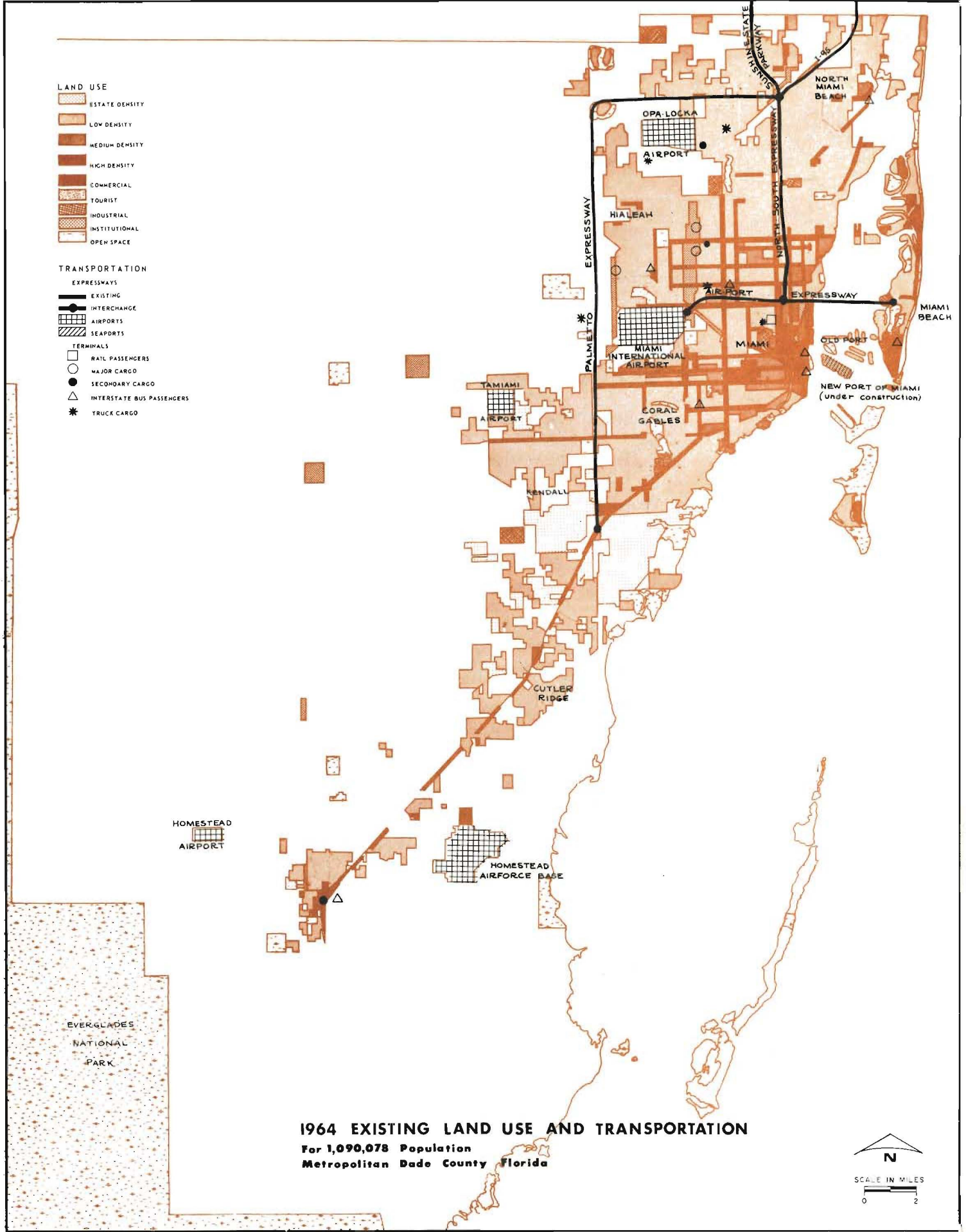
1. Update the 1959 land use study which was used in formulating the approved General Land Use Master Plan;
2. Analyze land use changes which have occurred within the last five years;
3. Process land use information by established traffic zones;
4. Determine the distribution of employment by various traffic zones throughout the area. This was done by various employment categories.
5. Study 1950 to 1964 trends related to employment distribution patterns in the area. This was also done by employment categories.
6. Develop employment distribution based on analysis of past employment;
7. Analyze 1940 to 1964 population distribution throughout the region;
8. Develop population projection procedures for 1964, 1975 and 1985 based on the historical analysis of population distribution;
9. Estimate employment and population for 1964, 1975 and 1985 by traffic zones; and
10. Evaluate the land use impact that various transportation alternatives would have on land development in Dade County.

1964 LAND USE

Existing generalized land use patterns in 1964—shortly after the time of the initial travel survey for MUATS—are shown with the then existing transportation system. The map on page 44 shows the 1964 existing land use and transportation for 1,090,078 population. This land use pattern illustrates the distribution of a resident population of 1,090,078 and a net residential area of 53,406 acres. The pattern was characterized by two urban clusters of development in the eastern half of the metropolitan area connected by a strong

- LAND USE**
- ESTATE DENSITY
 - LOW DENSITY
 - MEDIUM DENSITY
 - HIGH DENSITY
 - COMMERCIAL
 - TOURIST
 - INDUSTRIAL
 - INSTITUTIONAL
 - OPEN SPACE

- TRANSPORTATION**
- EXPRESSWAYS
- EXISTING
 - INTERCHANGE
- AIRPORTS
- SEAPORTS
- TERMINALS
- RAIL PASSENGERS
 - MAJOR CARGO
 - SECONDARY CARGO
 - INTERSTATE BUS PASSENGERS
 - TRUCK CARGO



1964 EXISTING LAND USE AND TRANSPORTATION
 For 1,090,078 Population
 Metropolitan Dade County Florida



transportation link. The northern, or major urban cluster around the City of Miami, constituted almost all the urban development of the county and had as its economic base a complex and diversified industrial mixture centered around tourism, airline activities, garment manufacturing and retirement. The southern, or minor urban cluster around Homestead, was primarily concerned with a large agricultural economy. Both urban clusters have grown outwardly from a central core, exhibiting a strong northward influence in their development.⁽¹⁾ This centralizing tendency increased more rapidly around the City of Miami resulting in higher densities in the northern part of the county than on the south.

Social preferences were also changing. In the post World War II years, more single family houses than apartments were built. In the 1960's, 65 percent of all new dwelling units have been apartments and the majority of these were constructed in the northern, or major, urban cluster.

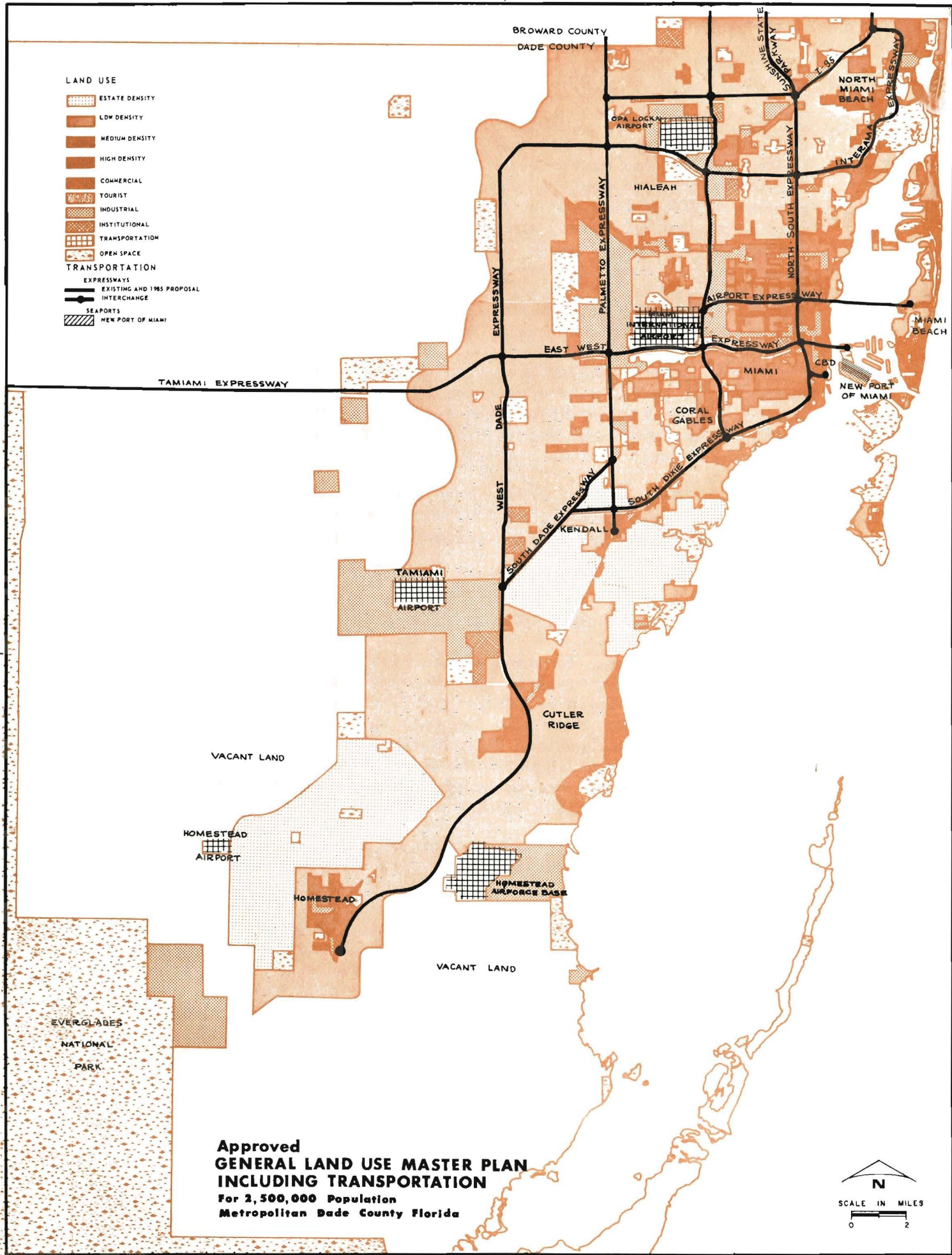
More people, making more trips, in more cars, encouraged by changing social preferences and improved economic conditions, provided the basis for transportation planning.

THE APPROVED GENERAL LAND USE MASTER PLAN

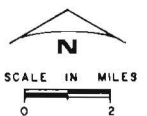
The first future land use plan to be used in calculating future transportation systems was the approved General Land Use Master Plan. Developed by the Metropolitan Dade County Planning Department under the Home Rule Charter, the areawide plan was approved by the Metropolitan Dade County Planning Advisory Board and the Board of County Commissioners in November 1965. The map on page 46 shows the approved General Land Use Master Plan, including transportation for 2,500,000 population.

The transportation facilities and corridors shown on the approved General Land Use Master Plan are general in nature and are intended to show only the size and approximate location. This plan provided for an estimated population of 2,500,000 permanent residents and a net residential area of 117,785 acres. Intensification of urban uses along Biscayne Bay extending to the Homestead core area was projected. The establishment of a new South Dade urban cluster in the Cutler Ridge area was also part of the plan. A significant expansion of urban land uses to the west in both the

(1) Goals and Objectives for Transportation Planning, Metropolitan Dade County Planning Department, December 1968



**Approved
GENERAL LAND USE MASTER PLAN
INCLUDING TRANSPORTATION
For 2,500,000 Population
Metropolitan Dade County Florida**



northern and southern portions of the county was forecast in the plan.

After the land use activities were calculated from the General Land Use Master Plan and processed by the 550 established traffic zones, the activities were then quantified in terms of the transportation facilities shown on the approved master plan. After testing this plan, it was found that the proposed transportation network was not adequate to serve the land use projected in the General Land Use Master Plan.

PROJECTED LAND USE

Revised 1985 Land Use Projections

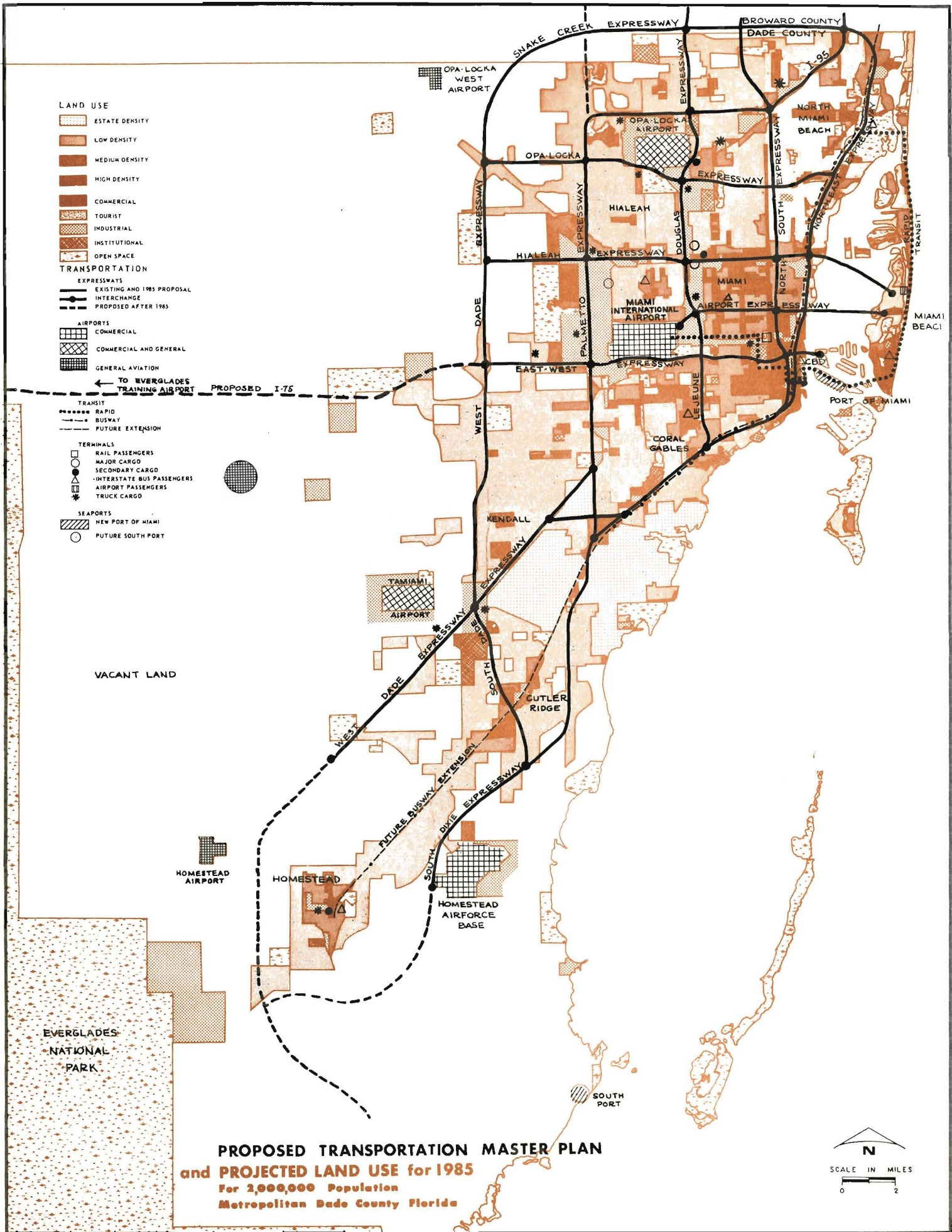
Soon after the completion of these initial calculations, it was determined that Metropolitan Dade County's population would not increase as rapidly as previously anticipated, and that the 1985 population would reach only 2,000,000 instead of 2,500,000. These revisions were brought about because it was determined that birth rates and in-migration trends were not holding at the high levels used in calculating the 2,500,000 figure for 1985.⁽¹⁾ It therefore became necessary to revise the detailed land use projections for each of the 550 traffic zones. The revised land use plan includes 89,034 net residential acres to accommodate the projected population of approximately 2,000,000. The map on page 48 shows the proposed transportation master plan and a generalization of projected land use for 1985 for 2,000,000 population.

1975 Land Use Projections

Forecasts of 1975 land use activities were made for the metropolitan area. The estimates were prepared using a process similar to that described for 1985 projections. These forecasts were used in tests from which recommended priorities for streets and highways were drawn. Figure 5 shows the 1975 land use and transportation plan for 1,486,800 population.

After projections were completed for land use factors, distributions were made to the 550 traffic zones. A transportation network was then developed. The map on page 50 shows a generalized interpretation of land use patterns and the system of expressways, transit, airports, seaports and terminals which will be required to serve the needs of the forecasted 1,486,800 resident

(1) See Forecast of Activities



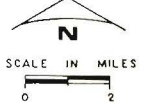
LAND USE

- ESTATE DENSITY
- LOW DENSITY
- MEDIUM DENSITY
- HIGH DENSITY
- COMMERCIAL
- TOURIST
- INDUSTRIAL
- INSTITUTIONAL
- OPEN SPACE

TRANSPORTATION

- EXPRESSWAYS**
- EXISTING AND 1985 PROPOSAL
 - INTERCHANGE
 - PROPOSED AFTER 1985
- AIRPORTS**
- COMMERCIAL
 - COMMERCIAL AND GENERAL
 - GENERAL AVIATION
- TRANSIT**
- RAPID
 - BUSWAY
 - FUTURE EXTENSION
- TERMINALS**
- RAIL PASSENGERS
 - MAJOR CARGO
 - SECONDARY CARGO
 - INTERSTATE BUS PASSENGERS
 - AIRPORT PASSENGERS
 - TRUCK CARGO
- SEAPORTS**
- NEW PORT OF MIAMI
 - FUTURE SOUTH PORT

**PROPOSED TRANSPORTATION MASTER PLAN
and PROJECTED LAND USE for 1985**
For 2,000,000 Population
Metropolitan Dade County Florida



population. It is anticipated that a total of 66,973 net residential acres of land will be developed in 1975.

The generalized plan is a modified interpolation between the 1964 and 1985 plans. An expansion of the 1964 patterns with evidence of the emerging South Dade urban cluster can be seen. Only moderate westward expansion is expected. The majority of projected land development will occur as a more intense growth of the present northern urban cluster.

A comparison of the forecasts of selected characteristics of the 1964, 1975, 1985 and Approved General Land Use Master Plan is provided by Table 11 for the study area. See Appendix B for a detailed table showing these comparisons by traffic zone and district.

Table 11

SUMMARY OF SELECTED LAND USE CHARACTERISTICS

<u>Characteristics</u>	<u>1964</u>	<u>1975</u>	<u>1985- MUATS</u>	<u>1985- GLUMP</u>
Population (millions)	1.1	1.5	2.0	2.5
Residential Acres (thousands)	53.4	67.0	89.0	117.8
Non-Residential Acres (thousands)	23.4	27.9	37.2	38.6
Total Employment (thousands)	429.4	659.2	860.7	907.4
Dwelling Units (thousands)	410.7	480.8	632.7	671.2
School Enrollment (thousands)	267.1	386.2	480.8	670.9
Shopping Center Parking Area (millions of square feet)	24.8	26.9	34.3	n.a.
Hotel and Motel Units (thousands)	62.7	76.1	87.9	86.9

Transportation Tests

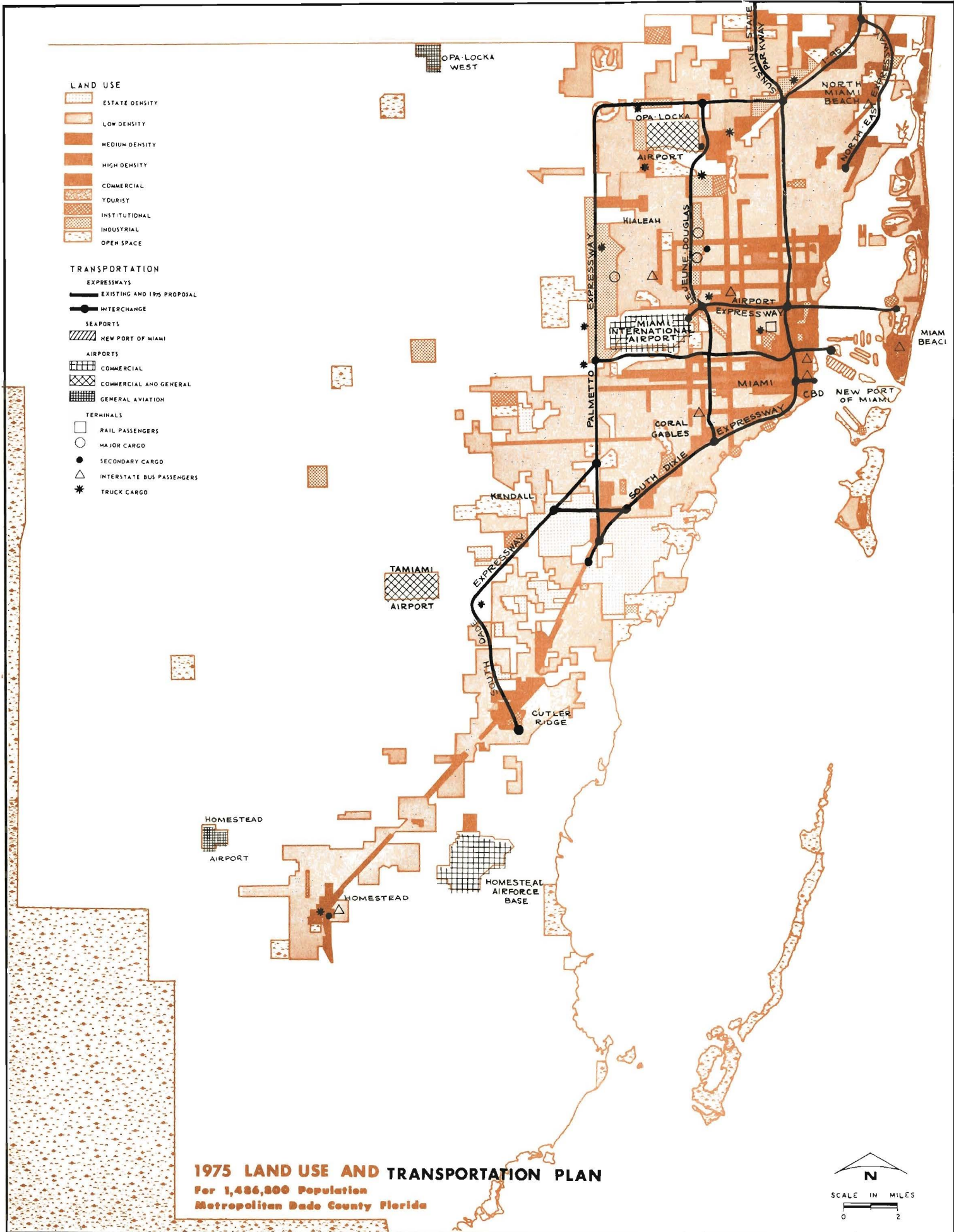
The three transportation systems and the 1964 existing system were subjected to seven "tests" in the process of developing the recommended transportation plans for 1985 and 1975.

LAND USE

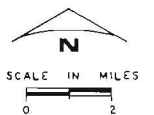
- ESTATE DENSITY
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TRANSPORTATION

- EXPRESSWAYS**
- EXISTING AND 1975 PROPOSAL
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1975 LAND USE AND TRANSPORTATION PLAN
 For 1,486,800 Population
 Metropolitan Dade County Florida



The first of these tests related the 1964 land use pattern to the existing highway system thorough the use of mathematical simulation models. The purpose of this test was the calibration of these models to accurately reflect the relationship between land uses in Metropolitan Dade County, the amount of traffic generated, and the existing transportation facilities and their adequacy to handle the traffic generated.

Test number two evaluated the relationship between the 1985 land use and the existing transportation network plus those transportation facilities committed to be built. This test used the approved General Land Use Master Plan, with its 2.5 million population estimate, as the basis for traffic generation. The main purpose of this test was to provide a representation of the 1985 traffic condition as it might be if the 1964 system were not improved.

The third test was the initial one in which a future transportation system was evaluated. The highway network was identical with that contained on the approved General Land Use Master Plan and included rapid transit. As with test number two, the approved General Land Use Master Plan formed the basis for land use projections. The main purpose of this test was to provide a representation of the 1985 traffic condition if the 1964 system were upgraded according to the transportation recommendations contained in the approved General Land Use Master Plan.

The fourth test was a modification of the previously tested network. It was at this point in the transportation study that the population and land use adjustment, reflecting a population of 2,000,000 instead of 2,500,000, was made to the approved General Land Use Master Plan. This test, then, had as its main purpose a determination of the relationship between a more realistic land use plan for 1985 and the transportation system felt to be necessary to serve it.

The fifth and sixth tests further refined the transportation network for 1985, and used the modified 1985 land use plan as the basis for traffic generation. Test number six was judged satisfactory in relating land use and transportation facilities, and was used in evolving the final recommended 1985 transportation system. The results of test number six indicated that the system of roads, highways and rapid transit used in this test were of sufficient quantity and location to handle the traffic generated by the 1985 land use.

Transportation test number seven was devised and evaluated with the 1975 land use forecasts as its base. The purpose

of this test was to determine which facilities should be built between 1964 and 1975, thereby establishing immediate priorities for the entire expressway and highway system.

FUTURE LAND USE AND TRANSPORTATION PLANNING

The recommendations for the 1985 transportation system are by no means the final transportation plan Dade County will have. Even as the 1985 transportation recommendations are being considered, they are being re-evaluated as land use and technological trends emerge. This process of continual transportation planning is outlined in the Metropolitan Dade County Planning Department publication titled Continuing Program for Transportation Planning.

The first tentative re-evaluation of the 1985 transportation system will present those transportation facilities felt to be necessary for 1995. Concurrently, the approved General Land Use Master Plan will continue its evolution to reflect development patterns now becoming apparent. For example, the more intense high-rise and condominium uses now being developed in the northeastern part of the county will be reflected on the revised land use plan, which had a direct effect on the 1985 transportation plan. The 1995 transportation plan, in turn, will have a direct effect on the next General Land Use Master Plan, which will reflect 1995 projected land uses.

The fact that these development trends will be reflected on future land use plans does not in any way detract from the current approved General Land Use Master Plan; it is still valid as a projection of land use for a 2,500,000 population. However, this currently existing plan is only one step in a constantly evolving process of continual re-evaluation that will never stop. As long as Dade County continues to develop, there will be a need for a constantly changing set of land use and transportation plans to insure the orderly growth and development of the county and the provision of a safe, economical, efficient and convenient transportation system for the movement of goods and people throughout Dade County.

APPENDIX A

GENERAL LAND USE MASTER PLAN STANDARDS FOR COMMERCIAL DEVELOPMENT

OBJECTIVES

Reallocate land for commercial activities sufficient to support and serve the projected population.

Encourage the distribution of commercial centers throughout the county in a pattern that offers maximum convenience from the standpoint of accessibility to areas served (i.e. Neighborhood, Community, District).

Properly relate commercial functions of the various centers to their areas served, i.e. price, choice and variety of goods.

Locate commercial centers in close proximity to other types of employment centers in order to enhance a wide variety and varied range of employment choices to every individual.

Provide a distribution of commerce throughout the County which will avoid unnecessary traffic congestion and minimize nuisances: i.e., strip zoning which fosters the conflicts of street use for commerce and traffic movement.

Provide sites for commercial centers whose environs are attractive and encourage pleasing site arrangements of buildings and landscape features to harmonize with surrounding developments.

PRINCIPLES

Shopping Centers

1. Each of the recognized types of shopping centers, should be located on or near the street or highway that serves best the commercial center to be developed and relate to the proper service unit level and market area that the commercial center is to serve.

2. Adequate on-site parking and controlled access to and from the street serving the center, should be provided in relation to the size and location of the shopping center.
3. The site should be of sufficient size to handle proposed development and future expansion of the center.
4. The sites should have proper screening and landscaping to protect it and adjacent land uses from each other.
5. Neighborhood shopping centers should be located to provide both safe access to people either on foot or by private and public transportation, and be within a mile radius or 6 minutes driving time of a neighborhood area.

Business Districts

1. Even though the business district has been replaced by the shopping center in many areas, the same criteria and standards for location, site size, etc., that apply to shopping centers, should still be used for the development of all size business districts.
2. Adequate parking should be provided in the immediate area, with controlled access from the street(s) that serve the district.

Highway Business

1. Should be in properly designed and orientated groupings or on service streets, paralleling a major street and not strung out in an unending line along both sides of our major streets. i.e., strip zoning along most major streets for commercial uses.
2. Be provided in logical and sound relation to the type of street serving the area.

SHOPPING CENTERS

STANDARDS:

<u>Type of Center</u>	<u>Leading Tenant Major Function</u>	<u>Avg. Min. Site Area</u>	<u>Minimum Pop. Support</u>	<u>Ranges in G.F.A.</u>	<u>Avg. Gross Floor Area</u>	<u>Radius Served</u>	<u>No. Units</u>	<u>Location</u>
Neighborhood	Supermarket or Drug Store	4-10 Acres	5-7000 People	30,000 to 75,000 sq. ft.	50,000 sq. ft.	½ mile	10-15	On a major street or intersection of a minor or major street
Community	Junior Dept. or Variety Store	10-30 Acres	20,000 to 30,000 People	100,000 to 300,000 sq. ft.	150,000 sq. ft.	2.0 miles	15-40	On or at the inter- section of major arterials and/or express streets
District	One or two major depart- ment stores	40-100 Acres	100,000 or more people	400,000 to 1,000,000 sq. ft.	400,000 sq. ft.	4.0 or more miles	40-80	To provide one-stop shopping, near the intersection of expressway and/or freeways

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APPENDIX B

Resident Population, Net Residential Area and Population Density Selected years, by Traffic Zones and Districts

Traffic Zones	Traffic Districts	Resident Population				Gross Land Area (Acres)	Net Residential Area (Acres)				Population Density			
		1964	1975	1985	GLUMP		1964	1975	1985	GLUMP	1964	1975	1985	GLUMP
1	1	0	0	0	0	6.6	0	0	0	2	-	-	-	-
2		0	0	0	0	13.4	0	0	0	0	-	-	-	-
3		356	1,100	3,000	1,900	26.8	2	3	8	5	178.0	367.0	375.0	380.0
4		39	0	0	0	19.7	1	0	0	0	39.0	-	-	-
5		39	0	0	0	10.1	1	0	0	1	39.0	-	-	-
6		0	0	0	0	3.9	0	0	0	0	-	-	-	-
7		240	200	0	0	3.8	2	0	0	1	120.0	-	-	-
8		39	0	0	0	3.7	1	0	0	1	39.0	-	-	-
9		0	0	0	0	6.1	0	0	0	0	-	-	-	-
10		0	0	0	0	7.5	0	0	0	0	-	-	-	-
11		161	1,300	2,000	1,000	14.3	2	8	10	6	80.5	162.5	200.0	166.6
12		0	0	0	0	4.4	0	0	0	0	-	-	-	-
13		0	0	0	0	4.5	0	0	0	0	-	-	-	-
14		0	0	0	0	6.0	0	0	0	1	-	-	-	-
15		80	100	0	0	5.9	2	0	0	1	40.0	-	-	-
16		120	100	0	0	9.0	2	0	0	1	60.0	-	-	-
17		618	600	0	0	21.0	3	0	0	5	206.0	-	-	-
18		161	100	0	0	21.0	2	0	0	3	80.5	-	-	-
19		315	300	0	0	21.0	2	0	0	2	157.5	-	-	-
20		1,133	1,700	5,000	2,900	17.8	3	4	10	7	377.6	378.0	500.0	414.3
District 1		3,301	5,500	10,000	5,800	226.5	23	15	28	36				
21	2	0	0	0	0	188.4	0	0	0	0	-	-	-	-
22		967	2,900	4,200	3,200	101.5	37	60	60	60	26.2	48.4	70.0	53.3
23		467	700	1,000	800	47.7	12	16	21	21	38.9	43.7	47.6	38.0
24		1,501	2,300	2,900	2,400	88.6	25	35	42	42	60.0	65.7	69.0	57.1
25		465	3,000	4,000	3,700	110.6	37	60	72	72	12.6	50.0	55.6	51.3
26		549	600	700	300	167.1	62	60	50	50	8.9	10.0	14.0	6.0
27		2,194	2,200	2,200	2,200	160.7	74	60	60	60	29.6	36.7	36.7	36.6
28		5,132	5,700	6,200	4,800	186.4	99	94	94	94	51.8	60.6	66.0	51.0
29		3,206	4,400	4,300	4,200	232.3	185	170	170	170	20.6	25.8	28.2	24.7
30		3,403	4,000	4,600	3,700	173.5	110	115	115	115	30.9	34.8	40.0	32.1
31		2,469	3,000	3,600	2,600	166.2	110	110	110	110	22.4	27.3	32.4	23.6
32		2,692	3,400	4,500	4,300	159.8	95	110	120	120	28.3	30.9	37.5	35.8
33		2,351	3,100	3,600	3,100	166.2	86	110	120	120	27.3	28.2	30.0	25.8
34		3,147	3,300	3,400	3,100	163.4	51	58	58	58	61.7	56.9	58.6	53.4
35		2,436	2,800	3,200	2,200	159.8	85	90	90	90	28.7	31.1	35.6	24.4
36		1,729	2,400	3,000	1,800	160.7	120	96	96	96	14.4	25.0	31.3	18.7
37	2	2,292	2,300	2,300	2,300	155.2	118	101	101	101	19.4	22.7	22.7	22.7
38		2,643	2,900	3,000	2,800	160.7	103	101	101	101	25.7	28.7	29.7	27.7
39		1,797	2,700	3,100	3,100	137.7	73	85	85	85	24.6	31.8	36.4	36.4
40		2,489	2,700	2,800	2,800	236.9	127	145	145	145	19.6	18.6	19.3	19.3
41		3,201	3,400	3,400	3,400	203.9	95	123	123	123	33.7	27.6	27.6	27.6
42		4,635	5,200	5,700	5,700	303.9	131	160	175	175	35.4	32.5	32.5	32.5
43		3,738	4,400	5,100	5,100	303.9	131	140	150	150	28.5	31.4	34.0	34.0
44		7,070	8,000	8,600	8,900	375.5	222	210	210	210	31.8	38.1	41.0	42.3
45		2,676	3,700	4,100	4,100	150.6	89	90	90	90	30.1	41.1	45.5	45.5
46		1,268	2,300	2,300	4,300	395.7	178	200	200	250	7.1	11.5	11.5	17.2
47		241	1,000	1,400	1,400	105.6	63	50	50	50	3.8	20.0	28.0	28.0
48		3,231	5,500	6,900	5,300	395.7	254	265	265	265	12.7	20.8	26.0	20.0
49		1,634	2,400	4,500	3,000	305.7	95	110	135	135	17.2	21.8	33.3	22.2
District 2		70,225	90,300	105,100	94,600	5,663.9	2,867	3,024	3,108	3,158				
50	3	163	200	300	300	21.6	7	10	10	10	23.3	20.0	30.0	30.0
51		8,346	8,000	7,500	7,500	161.6	66	60	60	60	126.5	133.3	125.0	125.0
52		448	200	200	500	35.6	13	5	5	10	34.5	40.0	40.0	50.0
53		1,303	1,400	1,500	1,800	49.6	13	15	17	20	100.2	93.4	88.3	90.0
54		1,631	1,600	1,600	1,800	50.5	13	14	14	15	125.5	114.2	114.2	120.0
55		1,612	2,300	2,900	7,300	70.2	19	20	25	35	84.8	115.0	116.0	208.5
District 3		13,503	13,700	14,000	19,200	389.1	131	124	131	150				
56	4	8,105	8,000	7,100	7,500	129.5	66	70	70	70	122.8	114.3	101.4	107.1
57		7,066	6,900	6,900	7,300	150.6	100	90	90	90	70.7	76.7	76.7	81.1
58		4,640	5,000	5,300	5,000	156.1	83	85	85	85	55.9	58.8	62.4	58.1
59		1,543	2,100	2,600	2,200	149.7	67	70	70	70	23.0	30.0	37.1	31.4
60		4,609	5,500	5,900	7,800	301.2	157	170	165	170	29.4	32.4	35.8	45.8
61		5,052	5,000	5,000	7,000	214.9	192	190	190	190	26.3	26.3	26.3	36.8
62		2,754	3,100	3,400	2,700	157.9	107	90	90	90	25.7	37.8	37.8	30.0
63		3,965	4,300	4,500	3,700	163.4	71	88	88	88	55.8	48.9	51.1	42.0
64		4,464	5,400	5,800	5,800	235.1	97	110	110	110	46.0	49.1	52.7	52.7
65		3,975	4,800	4,800	4,800	207.5	64	90	90	90	62.1	53.4	53.4	53.4
66		1,362	2,500	2,500	1,700	149.2	81	81	81	72	16.8	30.9	30.9	23.6
67		1,723	2,700	4,700	3,500	191.0	80	90	110	75	21.5	30.0	42.6	46.4
68		3,162	5,000	5,600	6,100	247.9	131	131	140	150	24.1	38.2	40.0	40.6
69		5,090	5,300	5,300	5,700	371.9	242	240	240	230	21.0	22.0	22.0	24.7
District 4		57,510	65,600	69,400	70,800	2,825.9	1,538	1,595	1,619	1,580				

		Population				Acres				Densities				
		1964	1975	1985	CLUMP	Land Area	1964	1975	1985	CLUMP	1964	1975	1985	CLUMP
70	5	9,528	8,200	8,200	6,700	101.0	63	45	45	45	151.2	182.5	182.5	148
71		7,105	5,800	5,800	4,000	71.6	27	20	20	20	263.1	290.0	290.0	200
72		7,710	7,300	7,300	5,000	88.1	49	40	40	40	157.3	182.5	182.5	125
73		6,694	6,700	6,700	4,300	83.6	39	40	40	30	171.6	167.5	167.5	143
74		8,623	6,000	4,400	4,400	119.4	59	40	30	30	146.2	150.0	146.6	146
75		1,290	1,100	1,100	1,100	101.5	50	35	35	35	25.8	31.4	31.4	31
76		6,062	6,400	10,400	10,400	371.9	85	100	120	120	71.3	71.1	86.6	86
77		3,224	3,300	3,300	1,300	1,033	45	45	45	30	71.7	73.4	73.4	43
78		1,543	1,800	1,800	1,800	110.2	25	40	40	40	61.8	45.0	45.0	45
79		3,368	4,800	6,500	4,000	137.7	17	40	40	40	198.1	120.0	162.6	100
80		0	800	2,000	0	67.5	0	20	40	2	-	40.0	50.0	-
81		0	0	0	0	27.5	1	0	20	1	-	-	100.0	-
82		1,192	1,700	2,100	2,100	55.1	73	40	50	50	16.3	42.5	42.0	42
83		4,143	5,000	9,000	10,100	147.8	72	75	75	75	57.5	66.7	120.0	134
District 5		60,482	58,900	68,600	55,200	1,586.2	605	580	640	558				
84	6	4,250	3,600	4,400	4,400	185.5	92	75	92	60	46.2	48.0	47.9	73
85		3,270	3,900	3,900	4,900	202.9	45	45	45	40	72.7	86.6	86.6	122
86		2,187	2,100	2,100	2,100	202.9	46	46	46	40	47.5	45.6	45.6	52
87		4,523	5,300	6,600	6,600	249.8	86	90	100	100	52.6	58.8	66.0	66
88		3,247	3,900	4,900	4,900	202.9	85	100	100	100	38.2	49.0	49.0	49
89		1,521	1,700	1,800	2,400	143.2	46	48	50	60	33.1	35.4	36.0	40
90		1,345	2,500	3,000	3,800	143.2	46	46	46	55	29.2	54.4	65.2	69
91		271	1,000	1,000	1,000	73.0	10	20	20	20	27.1	50.0	50.0	50
92		3,265	3,600	3,600	5,300	286.5	137	137	137	140	23.8	26.3	26.3	37
93		3,888	4,500	5,700	5,700	202.9	91	95	100	100	42.7	47.4	57.0	57
94		2,431	3,000	4,300	4,300	226.8	92	92	92	90	26.4	32.6	46.8	47
95		2,028	2,500	2,500	3,000	191.0	91	91	91	80	22.3	25.3	27.5	37
96		4,447	5,100	5,900	5,900	289.2	109	115	120	120	40.8	44.3	49.1	49
97		1,017	800	0	0	183.6	88	70	0	0	11.6	12.6	-	-
District 6		37,690	43,500	49,700	54,300	2,783.4	1,064	1,070	1,039	1,005				
98	7	3,104	2,500	0	0	275.5	88	71	0	0	35.3	35.2	-	-
99		4,156	5,000	8,800	8,800	257.1	88	95	125	125	47.2	52.6	70.4	70
100		4,801	6,000	6,500	9,900	250.7	92	110	116	140	52.2	54.6	56.0	70
101		6,112	6,300	6,300	6,300	250.7	137	137	137	135	44.6	46.0	46.0	46
102		4,501	5,200	6,000	6,000	270.0	171	171	171	140	26.3	30.4	35.0	42
		4,648	4,900	5,100	5,100	308.5	171	171	171	160	27.2	28.7	29.8	31
		12,749	13,300	13,300	13,300	358.1	171	190	190	190	74.6	70.0	70.0	70
105	7	2,917	3,300	3,800	4,900	155.2	86	86	86	75	33.9	38.4	44.2	65
106		3,094	3,600	4,000	4,600	155.2	85	85	85	70	36.4	42.4	47.0	65
107		3,260	4,200	5,000	5,000	167.1	65	73	80	80	50.2	58.3	62.5	62
108		113	0	0	0	179.1	5	-	-	-	-	-	-	-
109		50	0	0	0	261.7	2	-	-	-	25.0	-	-	-
110		2,032	3,000	3,700	4,200	231.4	140	140	140	90	14.5	21.4	26.4	46
111		1,061	2,000	2,500	4,400	214.9	86	89	90	90	12.3	22.5	27.8	48
112		5,114	5,400	5,400	5,400	191.0	85	85	85	80	60.2	63.5	63.5	67
113		11,722	12,800	13,100	13,100	455.5	171	192	200	200	68.5	66.8	65.5	65
District 7		69,434	77,500	83,500	91,000	3,981.7	1,643	1,695	1,676	1,575				
114	8	3,374	3,900	4,500	4,500	220.4	72	82	90	90	46.9	47.6	50.0	50
115		3,331	3,500	3,500	6,100	191.0	72	75	75	80	46.3	46.7	46.6	76
116		4,777	5,000	5,000	8,100	390.3	171	175	175	185	27.9	28.6	28.6	43
117		4,535	4,700	4,700	4,700	264.0	145	145	145	120	31.3	32.4	32.4	39
118		3,373	3,900	4,300	4,300	204.2	73	80	84	84	46.2	48.8	51.1	51
119		4,466	4,400	4,400	4,400	307.6	145	145	145	120	30.8	30.3	30.4	36
120		2,943	3,300	3,700	3,700	235.1	165	165	165	122	17.8	20.0	22.4	30
121		2,502	2,900	3,100	3,500	265.4	185	185	185	165	13.6	15.7	16.7	21
District 8		29,301	31,600	33,200	39,300	2,078.0	1,028	1,052	1,064	966				
122	9	3,795	4,600	5,800	6,800	275.5	171	171	171	140	22.2	26.9	33.9	48
123		1,849	2,600	2,900	4,000	113.4	86	86	86	40	21.5	30.2	33.8	100
124		23	900	1,300	2,700	101.5	1	15	20	30	23.0	60.0	65.0	90
125		4,010	4,500	7,000	10,200	471.5	281	281	281	200	14.3	16.0	24.9	51
126		3,685	3,700	3,700	3,700	420.6	141	141	141	275	26.1	26.2	26.2	13
127		814	900	900	900	382.0	52	55	55	55	15.7	16.3	16.3	16
128		836	1,000	1,000	1,000	358.0	52	60	60	60	16.1	16.7	16.7	16
129		3,399	3,400	3,400	3,400	298.4	140	140	140	160	24.3	24.3	24.3	21
130		2,874	3,200	3,400	5,100	310.4	172	178	180	185	16.7	18.0	18.9	27
131		4,682	4,700	4,700	4,700	310.4	201	210	210	210	23.3	22.3	22.3	22
132		2,121	2,700	3,300	3,300	286.5	140	145	155	155	15.2	18.6	21.2	21
133		1,934	3,100	3,100	5,100	597.8	70	134	134	220	27.6	23.2	23.2	23
134		2,430	2,800	3,400	3,400	400.3	70	140	250	250	34.7	20.0	13.6	13
135		4,710	5,100	5,100	5,100	488.5	281	281	281	260	16.8	18.2	18.2	19
136		3,271	3,600	3,600	3,600	281.9	140	150	150	150	23.4	24.0	24.0	24
137		1,936	2,100	2,100	2,400	204.8	129	129	129	100	15.0	16.3	16.3	24
138		3,577	3,800	4,000	5,500	389.8	201	205	210	235	17.8	18.5	19.0	23
District 9		45,946	52,700	58,700	70,900	5,691.3	2,328	2,521	2,653	2,725				

		Population				Acres				Densities				
		1964	1975	1985	CLUMP	Land Area	1964	1975	1985	CLUMP	1964	1975	1985	CLUMP
139	10	2,358	2,700	2,900	2,900	146.9	73	73	73	60	32.3	37.0	39.7	48.3
140		1,343	1,600	1,800	2,500	88.1	48	48	48	40	28.0	33.3	37.5	62.5
141		2,028	2,300	2,600	3,300	198.3	65	65	65	60	31.2	35.4	40.0	55.0
142		1,483	2,000	2,200	2,200	107.4	73	73	73	40	20.3	27.4	30.2	55.0
143		258	500	800	800	55.1	7	9	10	10	36.9	55.6	80.0	80.0
144		3,150	3,900	4,400	4,800	382.8	218	218	218	200	14.4	17.9	22.0	24.0
145		4,003	4,700	5,600	5,600	462.3	257	275	300	300	15.6	17.1	18.7	18.6
146		1,468	1,600	1,800	1,600	290.2	86	100	100	100	17.1	16.0	16.0	16.0
147		2,332	2,600	3,000	3,000	327.8	144	194	194	160	12.0	13.4	15.4	18.7
148		2,163	2,400	2,500	3,000	316.0	194	197	200	200	11.1	12.2	12.9	15.0
149		2,179	2,500	2,600	2,100	198.3	129	130	130	130	16.9	19.2	20.0	16.1
150		1,111	1,400	1,600	2,100	220.4	129	129	129	110	8.6	10.8	12.4	19.0
151		5,018	5,900	6,400	7,200	573.0	259	269	274	310	19.4	22.0	23.4	23.2
152		2,731	2,900	2,900	3,100	242.0	195	195	195	160	14.0	14.9	14.9	19.3
153		3,563	3,500	3,400	3,400	358.1	258	258	258	220	13.8	13.6	13.2	15.4
154		2,843	3,500	5,600	6,900	331.5	172	172	172	160	16.5	20.4	32.6	43.1
155		1,284	3,200	5,400	5,400	250.2	85	145	180	180	15.1	22.0	30.0	30.0
District 10		39,315	47,200	55,700	59,900	4,548.4	2,442	2,550	2,619	2,440				
156	11	3,822	4,900	5,700	6,700	496.3	233	250	272	320	16.4	19.6	21.0	20.9
157		741	2,600	4,300	4,300	131.3	29	40	45	45	25.6	65.0	95.5	95.5
158		2,088	2,300	2,400	2,400	173.5	42	70	80	80	49.7	32.8	30.0	30.0
159		2,987	4,300	5,900	5,900	353.5	232	232	232	220	12.9	18.5	25.4	26.8
160		472	900	900	900	87.2	15	35	35	35	31.5	25.7	25.7	25.7
161		1,639	2,200	2,200	2,200	213.0	198	198	198	125	8.3	11.1	11.1	17.6
162		7,527	8,000	8,500	8,500	565.6	397	397	397	390	19.0	20.2	21.4	21.8
163		2,075	2,200	2,200	2,700	255.2	198	198	198	175	10.5	11.1	11.1	15.4
164		2,525	2,700	2,700	2,700	226.8	183	183	183	150	13.8	14.7	14.7	18.0
165		2,658	3,700	4,800	4,800	466.5	198	240	280	280	13.4	15.4	17.1	17.1
166		4,687	5,000	5,100	5,100	384.8	174	230	240	240	26.9	21.8	21.2	21.2
167		1,348	1,800	2,000	3,600	161.1	139	139	139	100	9.7	13.0	14.4	36.0
168		2,401	2,800	3,000	3,300	597.0	174	174	174	150	13.8	16.1	17.2	22.0
169		53	2,400	4,900	4,900	1,684.0	3	80	160	160	17.7	30.0	30.6	30.6
170		193	5,500	6,500	6,800	409.3	15	150	172	180	12.9	36.6	37.8	37.7
District 11		35,216	51,300	61,100	64,800	6,205.1	2,230	2,616	2,805	2,650				
171	12	342	600	700	700	110.2	9	17	20	20	38.0	36.0	35.0	-
172		3,864	4,800	5,900	7,000	495.9	209	220	228	270	18.5	21.8	25.8	-
173	0	0	0	0	0	83.6	0	0	0	0	-	-	-	-
174	12	5,569	6,100	6,500	6,500	464.6	316	316	316	300	17.6	19.3	20.6	21.6
175		3,562	5,800	9,200	9,200	617.5	331	370	450	450	10.8	15.6	20.4	20.4
176		4,735	5,800	7,000	7,000	344.8	199	247	300	300	23.8	23.5	23.3	23.3
177		6,579	10,000	11,000	8,300	515.1	316	435	464	350	20.8	23.0	23.8	23.7
District 12		24,651	33,100	40,300	38,700	2,631.7	1,380	1,605	1,778	1,690				
178	13	119	4,500	4,500	6,500	185.6	38	55	55	80	3.1	81.8	81.8	81.2
179		4,188	5,100	5,900	5,900	472.0	246	275	300	300	17.0	18.5	19.6	19.6
180		3,648	5,800	8,800	8,800	472.9	169	200	250	250	21.6	29.0	35.2	35.2
181		261	2,500	4,800	5,800	2,046.4	15	65	124	150	17.4	38.5	38.7	38.6
182		3,424	5,500	6,200	7,200	748.4	286	290	292	340	12.0	18.9	21.2	21.1
183		2,018	4,000	6,300	7,500	564.7	57	200	286	340	35.4	20.0	22.0	22.0
184		13	2,000	5,800	11,900	1,944.0	1	100	195	400	13.0	20.0	29.8	29.7
District 13		13,671	29,400	42,300	53,600	6,434.0	812	1,185	1,502	1,860				
185	14	1,739	3,500	5,200	8,600	635.4	91	160	230	380	19.1	21.9	22.6	22.6
186		3,664	4,200	4,500	5,600	416.7	110	155	169	210	33.3	27.1	26.6	26.6
187		161	2,200	4,100	7,700	741.0	54	90	186	350	3.0	24.4	22.0	22.0
188		2,423	4,400	6,200	8,400	650.1	110	175	236	320	22.0	25.1	26.3	26.2
189		0	0	0	0	192.8	0	0	-	0	-	-	-	-
190		1,040	2,800	4,400	6,300	199.3	135	135	135	135	7.7	20.7	46.8	46.6
191		3,719	3,700	3,700	3,700	310.4	124	165	200	200	30.0	22.4	18.5	18.5
192		3,985	3,900	3,900	3,900	334.2	207	210	210	210	19.3	18.6	18.6	18.5
193		1,945	2,400	2,900	2,900	164.4	83	100	120	120	23.4	24.0	24.1	24.1
194		1,555	3,600	5,500	9,000	1,047.0	166	240	306	500	9.4	15.0	18.0	18.0
District 14		20,231	30,700	40,400	56,100	4,691.3	1,080	1,430	1,792	2,425				
195	15	510	2,500	4,300	7,800	743.8	41	170	248	450	12.4	14.7	17.3	17.3
196		1,665	2,400	3,300	7,800	743.8	159	164	169	400	10.5	14.6	19.5	19.5
197		1,290	2,100	3,000	7,800	644.6	159	159	160	340	8.1	13.2	18.7	22.9
198		3,960	5,400	6,600	8,000	677.6	207	270	330	400	19.1	20.0	20.0	20.0
199		5,020	5,300	5,600	5,600	478.9	325	325	325	280	15.4	16.3	16.6	20.0
200		2,576	4,300	5,800	7,500	619.8	81	210	294	380	31.8	20.4	19.7	19.7
201		2,110	2,400	2,700	2,700	310.4	138	150	160	160	15.3	16.0	16.9	16.8
202		4,058	4,200	4,300	4,300	298.4	139	170	179	179	29.2	24.7	24.0	24.0
District 15		21,189	28,600	35,400	51,500	4,517.3	1,249	1,618	1,865	2,589				

		Population				Acres				Densities				
		1964	1975	1985	GLUMP	Land Area	1964	1975	1985	GLUMP	1964	1975	1985	GLUMP
203	16	0	0	0	0	250.7	0	0	0	0	-	-	-	-
204		3,371	3,500	3,600	3,600	270.0	113	150	185	185	29.8	23.4	19.4	19.4
205	16	-5,975	6,200	6,300	6,300	520.7	241	295	320	320	24.8	21.0	19.7	19.6
206		4	0	0	0	411.8	1	0	0	0	-	-	-	-
207		4,613	5,600	6,800	6,800	803.4	262	310	360	360	17.6	18.0	18.9	18.8
208		1,295	2,000	3,000	3,000	417.7	104	125	155	155	12.5	16.0	19.4	19.3
209		6,647	8,000	8,800	8,800	743.8	492	492	492	450	13.5	16.3	17.9	19.5
210		5,348	5,500	5,600	5,600	298.4	210	210	210	210	25.5	26.2	26.6	26.6
211		3,280	3,600	3,800	4,000	160.7	79	89	95	100	41.5	40.5	40.0	40.0
212		3,674	4,300	4,900	5,700	353.5	79	105	133	155	46.5	41.0	36.8	36.7
213		6,962	7,500	8,000	11,500	734.6	357	357	357	450	19.5	21.0	22.4	25.5
214		236	1,500	4,700	4,700	322.3	19	45	140	140	12.4	33.4	33.6	33.5
215		0	0	0	0	358.1	0	0	0	0	-	-	-	-
District 16		41,405	47,700	55,500	60,000	5,645.7	1,957	2,178	2,447	2,525	-	-	-	-
216	17	0	1,100	2,400	7,600	743.8	0	60	126	400	-	18.3	19.0	19.0
217		4,716	5,500	6,500	7,500	620.7	160	250	330	380	29.5	22.0	19.7	19.7
218		6,337	6,900	7,500	7,500	546.9	319	335	360	360	19.9	20.6	20.8	20.8
219		4,270	5,100	6,000	7,500	610.4	266	290	320	400	16.1	17.6	18.7	18.7
220		0	1,000	2,300	7,500	620.7	0	60	132	430	-	16.7	17.4	17.4
221		0	0	0	0	743.8	0	0	0	0	-	-	-	-
222		0	600	3,000	7,100	573.9	0	35	161	380	-	17.2	18.6	18.6
223		4	1,600	5,500	8,500	688.7	1	80	278	430	-	20.0	19.7	19.7
224		0	1,600	5,500	8,500	597.9	24	80	278	430	-	20.0	19.8	19.7
225		28	1,000	2,500	2,500	587.7	24	65	160	160	1.2	15.4	15.6	15.6
District 17		15,355	24,400	41,200	64,200	6,334.5	794	1,255	2,145	3,370	-	-	-	-
226	18	0	0	0	0	506.9	0	0	0	0	-	-	-	-
227		961	2,300	4,000	6,100	501.4	92	115	170	260	10.4	20.0	23.4	23.4
228		2	2,000	3,500	3,700	362.7	1	85	151	160	-	23.6	23.1	23.1
229		27	4,100	6,500	10,200	1,097.3	67	255	382	600	0.4	16.1	17.0	17.0
230		205	1,900	3,000	3,700	538.1	68	140	162	200	3.0	13.6	18.5	18.5
231		6	0	0	0	1,616.2	1	-	-	-	6.0	-	-	-
232		0	1,400	3,200	3,200	1,147.8	0	60	90	90	-	23.3	35.5	35.5
233		1,277	3,600	5,000	5,800	602.4	136	252	294	340	9.4	14.3	17.0	17.0
234		1,140	4,400	6,300	6,300	560.6	136	291	360	360	8.4	15.1	17.5	17.5
District 18		3,618	19,700	31,500	39,000	6,933.4	501	1,198	1,609	2,010	-	-	-	-
235	19	3,926	6,100	7,500	8,100	685.0	203	346	426	460	19.3	17.5	17.6	17.6
236		8,973	8,900	8,800	8,800	6,684	406	406	410	410	22.1	22.0	21.4	21.4
237		6,757	6,700	6,600	6,600	477.5	281	310	330	330	24.0	21.6	20.0	20.0
238	19	5,724	7,100	7,900	7,900	477.5	281	306	340	340	20.4	23.2	23.2	23.2
239		350	700	1,100	1,100	262.6	19	30	40	40	-	23.3	27.5	27.5
240		1,815	1,800	1,400	1,400	146.0	141	141	75	75	12.9	12.8	18.6	18.6
241		3,008	3,200	3,300	3,300	238.7	140	150	165	165	21.5	21.3	20.0	20.0
242		3,963	3,900	3,900	3,900	275.7	141	190	190	190	28.1	20.5	20.5	20.5
243		3,713	3,900	3,900	3,900	321.4	140	190	190	190	26.5	20.5	20.5	20.5
244		3,514	4,100	4,400	4,600	463.7	68	180	201	210	51.7	22.8	21.9	21.9
245		20	2,000	5,400	5,600	525.2	1	95	251	260	-	21.0	21.5	21.5
246		2,513	5,900	5,900	5,900	235.1	68	150	150	150	37.0	39.3	39.3	39.3
247		4,829	6,600	6,600	6,600	523.2	136	190	190	190	35.5	34.7	34.7	34.7
248		1,819	3,200	3,200	5,200	231.4	141	140	140	140	12.9	22.9	22.9	37.1
249		0	0	0	-	187.3	0	0	0	0	-	-	-	-
250		3,187	4,600	4,600	4,600	286.5	140	170	170	170	22.8	27.0	27.0	27.0
251		2,250	2,200	2,200	2,200	293.8	141	100	100	100	16.0	22.0	22.0	32.0
District 19		56,361	70,900	76,700	79,700	6,299.0	2,447	3,094	3,368	3,420	-	-	-	-
252	20	4	1,000	2,600	5,200	1,170.8	1	80	200	400	-	12.5	13.0	13.0
253		1,391	5,200	7,300	9,800	1,260.8	73	400	580	780	19.1	13.0	12.6	12.6
254		0	600	3,000	3,900	596.9	0	50	246	320	-	12.0	12.2	12.2
255		4	600	3,000	3,900	585.9	1	50	246	320	-	12.0	12.2	12.2
256		0	0	0	2,600	596.9	0	0	0	230	-	-	-	11.3
257		0	0	1,000	3,900	596.9	0	0	82	320	-	-	12.2	12.2
258		0	0	1,000	3,900	1,270.8	0	0	93	360	-	-	10.8	10.8
259		18	100	1,000	3,900	2,141.4	1	10	93	360	18.0	10.0	10.8	10.8
District 20		1,417	7,500	18,900	37,100	8,220.4	76	590	1,540	3,090	-	-	-	-
260	21	28	400	1,900	3,900	623.0	2	40	176	360	14.0	10.0	10.8	10.8
261		7	500	2,000	3,900	596.9	1	50	180	350	7.0	10.0	11.1	11.1
262		21	600	3,000	3,900	642.8	3	60	270	350	7.0	10.0	11.1	11.1
263		21	400	1,500	2,600	453.6	24	40	150	260	1.0	10.0	10.0	10.0
264		36	700	3,000	3,900	717.2	25	70	278	360	1.4	10.0	10.8	10.8
265		4	500	2,600	3,600	265.0	1	40	101	140	4.0	12.5	25.7	25.7
District 21		117	3,100	14,000	21,800	3,298.5	56	300	1,155	1,820	-	-	-	-
266	22	4	0	1,200	6,200	3,840.2	1	0	126	650	4.0	-	9.5	9.5
267		0	0	0	0	3,912.3	0	0	0	0	-	-	-	-
268		0	0	0	0	2,190.1	0	0	0	0	-	-	-	-
		14	100	500	3,700	760.3	2	10	50	360	7.0	10.0	10.0	10.0
District 22		18	100	1,700	9,900	10,702.9	3	10	176	1,010	-	-	-	-

		Population				Acres				Densities			
		1964	1975	1985	LUMP	Land Area	1964	1975	1985	LUMP	1964	1975	1985
270	23	0	0	1,000	10,400	991.7	0	0	75	750	-	-	13.4
271		14	100	1,500	4,799	106.6	2	10	164	450	7.0	10.0	10.4
272		0	100	2,500	14,500	1,929.3	0	8	203	1,200	-	12.3	12.3
273		0	0	3,000	3,500	481.2	7	0	133	160	-	-	22.5
District 23		14	200	8,200	33,500	4,108.8	9	18	575	2,560	-	-	22.5
274	24	0	100	1,800	1,800	7,761.6	0	0	160	160	-	11.2	11.2
275		0	0	0	1,700	3,163.4	0	0	0	170	-	-	10.0
276		0	0	1,500	5,300	2,600.6	0	0	156	550	-	-	9.6
277		142	400	4,000	8,400	2,569.8	24	76	381	800	5.9	10.5	10.5
District 24		142	400	7,300	17,200	16,125.4	24	85	697	1,680	-	-	10.5
278	25	0	0	0	13,600	2,617.1	0	0	0	1,000	-	-	13.6
279		0	0	0	0	1,207.5	0	0	0	0	-	-	-
280		83	200	2,500	12,500	1,451.8	7	17	210	600	11.9	11.9	11.9
District 25		83	200	2,500	26,100	5,276.4	7	17	210	1,600	-	-	10.8
281	26	124	300	2,500	13,500	2,906.3	15	22	185	1,000	8.3	13.5	13.5
282		0	100	3,500	4,400	837.6	0	10	159	200	-	10.0	22.0
283		0	0	0	0	1,432.5	0	0	0	0	-	-	-
284		1,111	3,300	5,500	12,500	1,388.4	44	220	367	1,000	25.3	15.0	15.0
285		38	1,900	4,500	9,000	1,265.4	15	146	352	700	2.5	12.8	12.8
286		984	3,000	6,500	9,200	2,442.6	29	260	565	800	16.7	11.5	11.5
District 26		2,257	8,600	22,500	47,900	10,273.0	103	660	1,628	3,700	-	-	11.5
287	27	136	200	0	0	296.6	12	177	0	0	11.3	11.3	-
288		54	200	0	0	590.9	6	22	0	0	9.0	9.0	-
289		42	100	0	0	477.5	6	14	0	0	7.0	7.0	-
290		4,260	4,300	4,300	4,300	514.2	184	200	200	200	23.2	21.5	21.5
291		2,867	3,200	3,400	3,200	494.0	230	240	256	240	12.6	13.3	13.3
292		2,427	3,000	3,700	3,700	371.9	138	130	160	160	17.6	23.0	23.1
293		3,385	3,600	3,800	5,000	533.5	137	146	154	180	24.7	24.7	27.7
294		2,393	5,000	5,200	6,600	529.1	229	250	260	250	10.4	20.0	20.0
District 27		15,564	19,600	20,400	22,900	38,077	942	1,179	1,030	1,030	-	-	-
295	28	2,049	2,500	2,500	3,500	234.1	60	79	79	110	34.2	31.8	31.8
296		6,614	7,500	7,500	7,500	477.5	281	290	290	290	23.5	25.8	25.8
297		3,529	3,600	3,500	3,600	238.7	140	145	145	145	25.2	24.8	24.8
298		1,798	1,900	2,000	3,200	155.2	82	87	91	100	21.9	21.9	32.0
299	28	3,494	3,800	4,100	4,100	235.1	154	157	160	160	22.7	24.2	25.6
300		2,041	2,100	2,100	1,600	247.5	51	51	51	50	40.0	41.2	41.2
301		1,418	1,400	1,400	1,400	131.3	60	60	60	60	23.6	23.3	23.3
302		1,898	2,200	2,400	2,400	202.0	141	141	100	100	13.5	15.6	24.0
303		1,014	1,200	1,400	1,400	180.0	68	75	80	80	14.9	16.0	17.5
District 28		23,855	26,200	27,900	28,700	2,191.4	1,037	1,085	1,056	1,095	-	-	17.5
304	29	21	0	0	0	1,010.1	3	0	0	0	7.0	-	-
305		0	0	0	0	1,175.4	0	0	0	0	-	-	-
306		0	0	0	0	322.3	0	0	0	0	-	-	-
307		0	0	0	0	768.6	0	0	0	0	-	-	-
308		122	200	200	0	374.9	19	19	19	5	6.4	10.5	10.5
309		1,358	1,700	1,800	1,800	283.7	66	66	66	65	21.0	22.8	24.2
310		435	600	600	900	250.7	66	35	45	45	6.6	20.0	20.0
311		2,037	2,500	2,600	800	156.1	57	50	40	40	30.4	50.0	50.0
312		1,005	1,000	2,200	1,800	152.4	107	70	40	40	9.4	24.3	55.0
313		2,344	2,300	2,600	2,600	156.1	33	87	90	90	71.0	28.8	28.8
314		1,929	2,600	3,300	2,600	152.4	71	96	118	100	26.9	27.0	28.0
315		3,685	5,600	5,600	4,200	606.0	166	207	252	175	22.2	22.2	22.2
316		4,172	5,200	5,500	5,400	303.0	213	260	275	210	19.6	20.0	20.0
317		3,229	4,000	4,400	6,400	561.1	264	264	236	300	12.2	18.9	31.3
318		4,007	4,200	4,300	4,700	384.7	214	214	165	180	18.7	19.6	26.0
319		1,610	2,300	2,400	2,900	524.2	95	95	80	80	16.9	24.2	36.2
320		2,814	3,000	3,400	4,800	120.3	106	106	106	100	23.7	28.3	32.1
District 29		28,881	36,200	42,700	55,900	7,301.1	1,440	1,569	1,532	1,428	-	-	48.0
321	30	3,448	5,000	6,400	6,200	183.6	156	130	120	120	21.8	38.5	37.5
322		119	400	600	300	38.2	4	6	10	10	29.7	66.7	60.0
323		0	0	3,500	700	38.7	15	15	15	15	53.0	60.0	66.7
324		0	0	0	0	30.7	0	0	0	0	-	-	-
325		194	200	0	200	13.7	5	5	5	5	38.5	40.0	40.0
326		0	0	0	0	0.0	0	0	0	0	-	-	-
327		0	0	0	0	76.0	0	0	0	0	-	-	-
328		683	1,200	1,200	1,000	67.0	106	35	35	35	4.3	34.3	34.3
329		1,923	2,600	3,300	4,200	240.7	8	95	100	100	21.9	27.4	33.0
330		5,853	6,000	6,100	7,100	575.6	211	293	250	250	27.8	26.1	24.4
331		3,325	3,900	4,600	4,600	291.1	153	150	200	200	20.9	21.6	23.0
332		1,468	1,700	2,000	1,700	231.4	105	110	120	115	14.2	12.4	15.4
333		779	1,000	2,500	2,000	83.6	106	40	60	50	7.3	46.0	41.6
334		1,440	1,700	1,800	2,400	220.4	132	132	122	120	12.9	14.4	16.0
335		3,181	3,200	7,900	6,300	640.0	211	250	240	240	35.1	20.8	22.6
336		3,179	4,200	4,600	4,600	375.5	228	238	240	240	13.9	17.6	19.1
337		3,518	4,500	5,000	4,600	225.9	114	150	165	165	10.9	30.0	30.3
338		3,631	4,500	5,500	4,100	396.7	228	250	280	250	18.9	18.0	19.6
339		4,016	4,100	4,100	4,100	275.0	114	150	150	150	35.2	27.3	27.3
340		6,210	7,200	8,000	7,000	554.6	457	390	390	380	13.6	18.5	20.5
341		2,374	2,800	3,200	2,500	213.0	116	140	150	135	20.5	20.0	21.3
342		2,765	3,500	4,300	2,700	472.0	141	200	250	180	19.6	17.5	17.2
District 30		49,125	61,200	73,100	64,900	4,960.7	2,698	2,719	3,032	2,810	-	-	15.0

	Population				Land Area	Acres				Densities				
	1964	1975	1985	GLUMP		1964	1975	1985	GLUMP	1964	1975	1985	GLUMP	
343	31	374	800	1,300	1,100	281.0	50	60	80	80	7.5	13.3	16.3	13.7
344		1,301	2,000	2,900	2,700	393.0	201	230	275	270	6.5	8.7	10.5	10.0
345		530	2,400	2,400	2,400	283.7	151	150	150	150	3.5	16.0	16.0	16.0
346		2,169	3,000	3,900	3,900	264.4	162	160	160	160	13.4	18.8	24.4	24.3
347		1,162	2,400	4,000	4,000	236.9	145	155	160	160	8.0	15.5	25.0	25.0
348		3,020	3,700	4,300	4,300	409.5	241	240	240	240	12.5	15.4	17.9	17.9
349		2,719	3,500	4,400	4,400	418.7	241	270	300	300	11.3	13.0	14.6	14.6
350		2,769	4,400	4,400	4,400	421.5	241	260	260	260	11.5	16.9	16.9	16.9
351		1,904	2,300	2,700	2,700	358.1	134	140	150	150	14.2	16.4	18.0	18.0
352		656	1,200	1,700	1,700	167.1	107	110	110	100	6.1	10.9	15.5	17.0
353		3,825	4,400	4,900	3,900	238.7	75	88	98	75	-	50.0	50.0	52.0
354		3,093	3,400	3,700	3,500	131.3	97	97	97	60	31.9	35.0	38.2	58.0
355		0	0	0	0	15.4	0	0	0	0	-	-	-	-
356		844	1,100	1,200	1,000	108.3	110	55	60	50	7.7	20.0	20.0	20.0
357		1,831	4,000	4,400	2,900	266.3	163	180	185	155	11.2	22.2	23.8	18.7
358		2,608	3,000	3,200	2,800	304.8	182	200	210	200	14.3	15.0	15.2	14.0
359		1,203	2,100	3,000	1,900	139.6	162	162	162	85	7.4	13.0	18.5	22.4
360		1,677	2,500	3,500	2,200	422.4	256	275	295	260	6.6	9.1	11.9	8.4
361		1,458	2,600	4,100	4,100	310.4	182	190	215	215	8.0	13.7	19.0	19.0
362		828	2,100	3,700	3,900	175.4	71	100	120	120	11.7	21.0	30.8	32.5
363		2,477	2,900	3,300	4,400	306.7	175	175	175	220	14.2	16.6	19.4	20.0
364		230	200	200	200	112.0	44	5	5	5	5.2	40.0	40.0	40.0
365		3,335	3,400	3,400	3,400	191.9	44	100	100	100	75.8	34.0	34.0	34.0
366		2,293	2,500	2,700	4,200	317.7	222	220	220	220	10.3	11.4	12.3	19.0
367		1,834	2,100	2,300	2,400	196.5	131	136	138	140	14.0	15.4	16.7	17.1
368		62	300	500	1,800	907.2	45	65	85	300	1.4	4.6	5.9	6.0
District 31		44,202	62,300	76,100	74,200	7,378.5	3,632	3,823	4,050	4,075				
369	32	0	0	0	0	575.8	0	0	0	0	0	14.2	-	-
370		474	1,700	2,500	6,100	568.4	94	120	148	360	5.0	14.1	16.9	16.9
371	32	1,390	4,500	5,300	6,500	589.5	150	320	265	360	9.3	17.4	20.0	20.0
372		3,226	4,700	5,900	6,500	628.0	219	270	295	360	14.7	22.0	20.0	20.0
373		1,278	2,200	3,400	4,000	293.8	90	100	153	180	14.2	16.0	22.2	22.2
374		1,884	2,400	2,900	3,300	332.4	119	150	176	200	15.8	18.7	16.5	16.5
375		1,120	2,800	3,000	3,100	308.5	94	150	176	160	11.9	16.4	19.3	19.3
		3,233	3,600	3,900	4,900	311.3	219	219	210	210	14.8	22.5	23.3	23.3
		2,014	2,700	3,400	3,900	293.8	90	120	153	175	22.4	30.0	22.2	22.2
378		4,616	4,800	5,000	5,200	337.9	149	160	202	210	31.0	19.0	24.7	24.7
379		3,161	3,800	4,500	3,600	314.0	200	200	238	190	15.8	19.0	18.9	18.9
380		3,238	3,700	4,500	3,700	310.4	163	180	225	185	19.9	20.6	20.0	20.0
District 32		25,634	36,900	44,300	50,800	4,863.8	1,587	1,989	2,241	2,590				
381	33	0	200	500	1,100	202.0	0	10	18	40	-	20.0	27.5	27.5
382		2,164	2,500	2,500	4,500	316.8	151	175	175	200	14.3	14.3	14.3	22.5
383		1,334	2,000	2,900	2,900	604.2	302	310	350	350	4.4	6.5	8.3	8.2
384		593	1,800	5,300	5,300	437.1	152	180	320	320	3.9	10.0	16.5	16.5
385		305	1,500	3,100	2,600	249.8	126	150	170	170	2.4	10.0	18.2	15.2
386		1,100	4,800	4,800	4,700	598.7	121	348	348	340	9.1	13.8	13.8	13.8
387		3,640	4,000	4,100	4,000	292.9	169	200	200	195	21.5	20.0	20.5	20.5
388		3,011	3,600	3,800	3,700	321.4	194	195	211	205	15.5	18.5	18.0	18.0
389		4,541	4,800	4,800	4,800	364.5	243	243	245	240	18.7	19.5	19.5	20.0
390		3,397	3,700	3,700	4,100	315.9	182	199	199	220	18.7	18.6	18.6	18.6
391		557	1,500	3,600	6,700	609.7	122	140	216	400	4.6	10.7	16.7	16.7
392		2,370	4,000	9,700	9,700	776.8	252	325	510	510	9.4	12.6	19.0	19.0
393		4,974	5,100	5,100	5,100	314.0	244	244	245	245	20.4	20.9	20.8	20.8
394		2,944	3,200	3,200	3,800	266.3	183	183	185	185	16.1	17.4	17.3	20.5
395		2,245	3,500	4,600	6,800	548.2	243	250	258	380	9.2	14.0	17.8	17.8
396		0	1,000	2,300	2,100	505.0	63	80	120	120	-	12.5	19.2	17.5
District 33		33,175	47,200	64,000	71,900	6,723.3	2,747	3,232	3,770	4,120				
397	34	2,534	7,600	13,600	19,600	2,797.8	72	300	800	1,150	35.2	25.4	17.0	17.0
398		1,189	800	3,500	5,500	695.1	24	60	250	380	7.9	13.3	14.0	14.4
399		165	600	3,500	5,500	683.1	24	45	250	380	6.9	13.3	14.0	14.4
400		71	400	3,500	5,500	662.9	25	30	250	380	2.8	13.3	14.0	14.4
401		0	700	2,100	8,100	1,803.3	0	45	130	500	-	15.6	16.2	16.2
402		0	0	0	1,800	3,668.2	0	0	0	120	-	-	-	15.0
403		0	0	1,000	2,700	2,940.0	0	0	70	180	-	-	14.3	15.0
404		0	0	0	0	4,030.9	0	0	0	0	-	-	-	-
405		0	0	0	0	5,007.9	0	0	0	0	-	-	-	-
District 34		2,959	10,100	27,200	48,700	22,289.2	145	480	1,750	3,090				

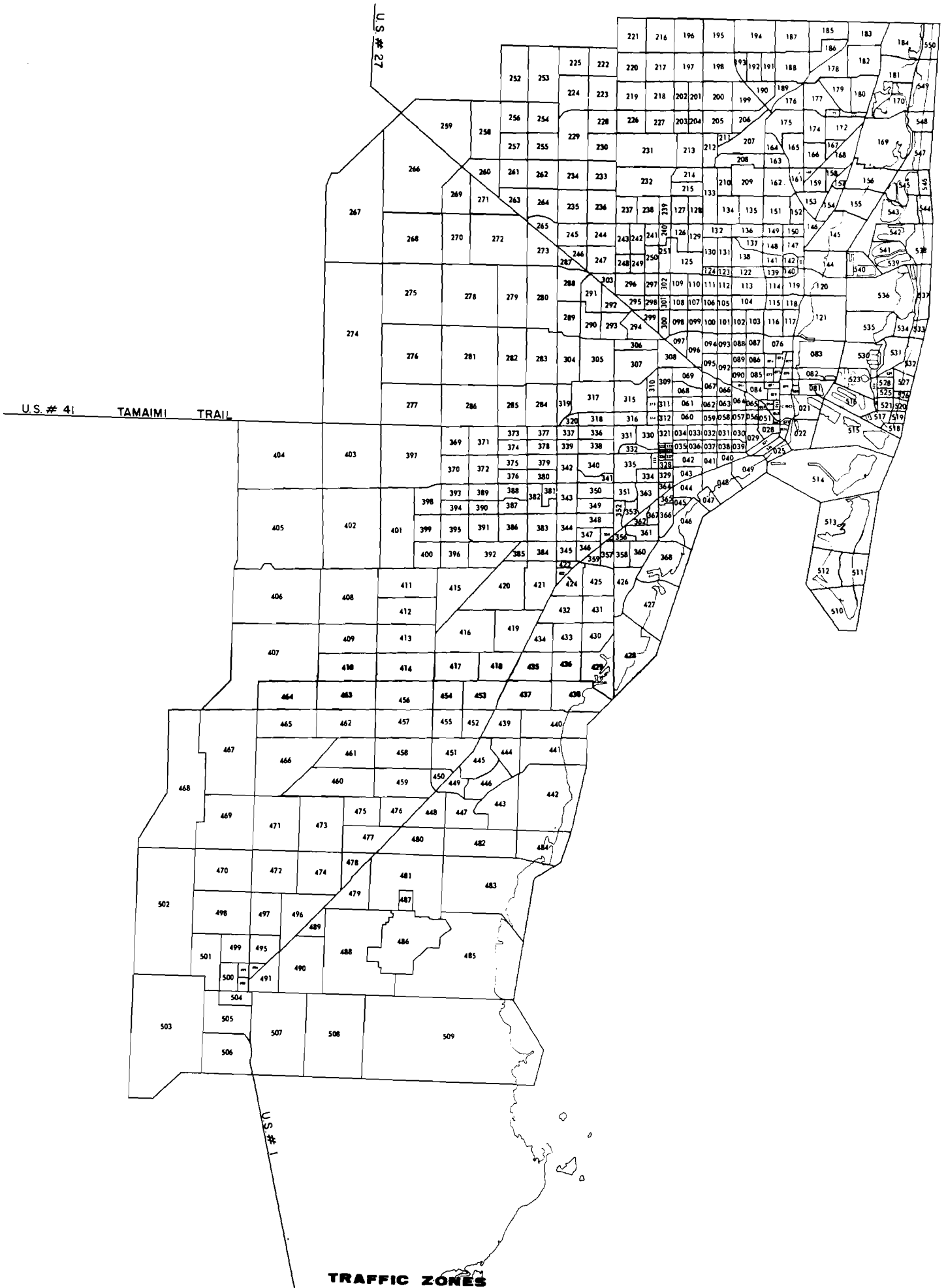
Population					Acres					Densities				
	1964	1975	1985	(LUMP	Land Area	1964	1975	1985	(LUMP	1964	1975	1985	(LUMP	
406	35	0	0	0	0	3,699.4	0	0	0	0	-	-	-	-
407		0	0	0	0	4,643.3	0	0	0	0	-	-	-	-
408		0	900	2,300	9,100	2,511.3	0	60	135	600	-	15.0	14.8	15.1
409		7	0	0	0	1,274.4	0	0	0	0	-	-	-	-
410		0	0	0	0	1,286.4	0	0	0	0	-	-	-	-
411		14	500	3,100	11,100	1,264.4	24	35	190	650	0.6	14.3	16.3	17.0
412		0	900	4,000	11,100	1,218.5	0	55	250	650	-	16.4	16.0	17.0
413		0	0	0	0	1,259.8	0	0	0	0	-	-	-	-
414		0	0	0	0	1,237.7	0	0	0	0	-	-	-	-
District 35		21	2,300	9,100	31,300	18,395.2	24	150	575	1,900	-	-	-	-
415	36	305	4,000	5,100	4,600	1,406.7	126	270	250	250	2.4	14.8	20.4	18.4
416		544	2,500	6,300	5,800	1,922.7	126	400	1,000	1,000	4.3	6.3	6.3	5.8
417		5,823	7,800	10,100	13,400	948.5	214	315	415	550	27.2	24.8	24.4	24.3
418		264	2,000	3,700	4,700	749.3	85	250	394	500	3.1	9.4	9.4	9.4
419		2,609	4,000	5,400	4,900	1,266.2	251	480	720	650	10.4	8.3	7.5	7.5
420		1,978	4,000	6,600	6,100	1,648.2	315	600	870	800	6.3	6.7	7.6	7.6
421		2,408	7,000	8,500	8,000	1,070.6	429	500	510	480	5.6	14.0	16.6	16.6
District 36		13,931	31,300	45,700	45,700	9,012.2	1,546	2,815	4,159	4,230	-	-	-	-
422	37	0	0	0	0	101.9	0	0	0	0	-	-	-	-
423		0	1,000	2,000	1,900	110.2	0	10	20	20	-	100.0	100.0	95.0
424		915	3,000	2,800	2,800	493.1	325	340	340	250	2.8	8.8	8.2	11.2
425		1,690	2,400	2,900	2,900	717.1	487	495	502	380	3.5	4.8	5.8	7.6
426		526	1,300	1,800	1,800	565.8	163	250	300	300	3.2	5.2	6.0	6.0
427		122	400	600	1,800	865.9	44	110	150	300	2.8	3.6	4.0	6.0
428		98	1,000	2,300	7,000	1,102.8	44	75	110	380	2.2	13.3	18.2	18.4
429		212	700	1,300	1,300	669.4	77	77	77	75	2.8	9.1	16.9	17.3
430		2,104	2,600	3,200	3,200	606.0	325	355	380	380	6.2	7.3	8.4	8.4
431		1,558	2,200	2,600	2,600	632.6	325	375	400	400	4.8	5.9	6.5	6.5
432		2,434	2,900	2,900	2,900	777.7	487	490	490	450	5.0	5.9	5.9	6.4
433		2,243	3,500	3,500	2,400	628.0	325	440	440	380	6.9	8.0	7.9	6.7
434		1,722	2,700	4,000	4,000	601.4	325	325	325	320	5.3	8.3	12.3	12.5
435		1,469	3,300	5,600	8,900	803.4	154	250	320	480	9.5	13.2	17.5	18.5
436		824	1,600	2,500	1,800	633.6	154	300	440	300	5.4	5.3	5.7	6.0
District 37		15,917	28,600	37,700	45,300	9,308.9	3,235	3,892	4,294	4,415	-	-	-	-
437	38	1,669	4,200	7,500	12,900	1,066.0	154	300	400	650	10.8	14.0	18.8	-
438		317	1,200	2,200	2,200	704.3	39	200	380	380	8.1	6.0	5.7	5.7
439		1,755	2,900	6,100	9,300	706.1	154	160	275	420	11.4	18.1	22.2	22.1
440		190	800	4,300	7,500	929.2	39	73	390	500	4.9	11.0	11.0	15.0
441		489	1,300	4,700	8,700	1,044.9	117	155	270	500	4.2	8.4	17.4	17.4
442		4	300	3,500	15,100	2,070.5	1	15	185	800	-	20.0	18.9	18.8
443		112	400	2,800	10,800	1,139.5	3	20	160	600	-	20.0	17.5	18.0
444		1,891	3,500	6,000	7,600	587.6	156	200	340	420	12.1	17.5	17.6	18.0
445		3,824	7,000	8,800	12,360	750.2	155	290	358	500	24.7	24.2	24.6	24.6
446		5,732	7,400	7,900	7,900	637.2	233	400	420	420	24.6	18.5	18.8	18.8
447		1,138	3,000	4,700	4,700	796.1	78	180	280	280	14.6	16.7	16.7	16.7
448		4,077	5,500	7,100	9,400	704.3	133	235	348	460	30.7	23.4	20.4	20.4
449		43	100	100	100	303.9	2	2	2	2	21.5	50.0	50.0	50.0
District 38		21,241	37,600	65,700	108,500	11,439.8	1,264	2,230	3,808	5,932	-	-	-	-
450	39	106	1,500	3,000	3,000	198.3	34	50	125	125	3.1	30.0	24.0	24.0
451		974	6,000	7,900	12,900	903.5	51	250	310	500	19.1	24.0	25.5	25.8
452		5,404	6,200	7,100	8,100	549.1	257	265	270	300	21.0	23.4	26.3	27.0
453		2,178	4,300	4,300	8,300	805.3	171	175	175	480	12.7	24.6	24.6	17.2
454		0	1,800	4,000	10,500	615.2	0	75	160	410	-	24.0	25.0	25.6
455		859	3,100	5,800	7,300	644.6	128	200	350	450	6.7	15.5	16.6	16.2
456		0	0	0	0	1,246.0	0	0	0	0	-	-	-	-
457		442	2,600	4,700	4,700	1,234.1	73	150	250	250	12.9	17.3	18.8	18.8
458		3,559	4,100	7,400	17,900	1,381.0	136	200	400	960	26.2	20.5	18.5	18.6
459		1,005	3,100	7,600	19,600	1,289.2	68	150	350	900	14.8	20.6	21.7	21.7
460		146	400	4,000	10,600	1,636.2	17	30	300	800	8.6	13.3	13.3	13.2
461		146	400	2,500	8,900	1,113.8	17	27	165	600	8.6	14.8	15.2	14.8
462		0	300	4,300	9,800	1,256.1	0	20	320	650	-	15.0	15.0	15.0
463		0	300	4,100	10,100	1,271.7	24	20	275	650	-	15.0	14.9	15.5
464		0	0	0	0	1,285.3	0	0	50	280	-	-	14.0	13.7
465		7	100	100	3,700	1,244.2	24	7	50	280	0.3	14.3	14.0	13.2
466		127	300	1,000	5,400	2,437.8	17	20	70	500	7.5	15.0	14.3	10.8
467		0	550	0	0	3,397.3	18	45	0	0	-	13.8	-	-
468		0	150	0	0	3,985.0	2	10	0	0	-	15.0	-	-
District 39		15,453	35,200	69,600	144,500	26,473.7	1,037	1,694	3,620	8,135	-	-	-	-

		Population				Acres				Densities				
		1964	1975	1985	CLUMP	Land Area	1964	1975	1985	CLUMP	1964	1975	1985	CLUMP
469	40	889	500	1,500	1,500	2,317.5	55	60	200	200	16.2	8.3	7.5	7.1
470		593	1,000	2,300	2,300	1,849.4	55	150	350	350	10.8	6.7	6.5	6.5
471		500	700	3,700	6,700	1,919.0	55	95	500	1,000	9.1	7.4	7.4	6.7
472		308	500	2,200	4,200	1,436.7	55	90	400	750	5.6	5.6	5.5	5.6
473		330	600	5,200	9,200	1,868.5	55	75	550	850	6.0	8.0	9.5	10.8
474		242	600	4,100	5,600	1,448.1	73	110	750	750	3.3	5.5	5.5	7.4
475		146	400	2,000	7,600	767.6	18	30	135	500	8.1	13.3	14.8	15.2
476		2,062	2,800	5,200	9,000	741.0	68	120	250	420	30.3	23.4	20.0	21.4
477		410	800	2,900	7,000	967.9	18	70	250	600	22.8	11.4	11.6	11.6
478		456	700	1,600	1,600	454.5	19	100	250	250	24.0	7.0	6.4	6.4
District 40		5,936	8,600	30,700	54,700	13,770.2	471	900	3,635	5,670				
479	41	2,259	4,300	6,500	7,400	947.7	141	275	400	480	16.0	15.6	16.2	15.4
480		102	2,400	5,400	12,400	1,205.7	57	120	310	700	1.8	20.0	17.4	17.7
481		754	4,300	9,000	23,800	3,010.6	94	250	530	1,400	8.0	17.2	17.0	17.0
482		0	200	2,800	12,800	1,578.3	39	10	150	680	-	20.0	18.7	18.8
483		67	200	2,800	14,800	3,167.8	47	50	130	680	1.4	4.0	21.6	21.7
484		0	0	200	1,200	1,037.0	0	0	8	50	-	-	25.0	24.0
District 41		3,182	11,400	26,700	72,400	10,947.1	378	705	1,528	3,990				
485	42	25	100	500	-	5,192.4	5	20	100	-	-	5.0	5.0	-
486		2,788	2,500	0	-	3,887.1	94	-	-	1	29.7	-	-	-
487		3,611	5,000	7,000	4,700	226.8	141	150	170	150	25.6	33.3	41.2	31.3
488		4,905	6,100	7,600	7,600	2,468.8	188	300	450	450	26.1	20.4	16.9	16.8
489		1,687	2,100	2,700	2,700	327.4	140	120	150	150	12.1	17.5	18.0	14.0
490		1,422	3,100	5,300	11,000	1,808.5	93	175	300	700	15.3	17.7	17.7	15.7
491		589	1,300	2,200	4,700	668.0	54	70	90	200	10.9	18.6	24.4	23.5
District 42		15,027	20,200	25,300	30,700	14,579.0	715	835	1,260	1,651				
492	43	1,424	1,700	2,200	3,500	167.1	64	65	65	80	22.3	26.2	33.9	43.7
493		2,468	2,500	2,600	2,400	167.1	32	50	50	45	77.1	50.0	52.0	53.3
494		87	100	200	0	119.4	53	50	50	0	1.6	2.0	4.0	-
District 43		3,979	4,300	5,000	5,900	453.6	149	165	165	125				
495	44	2,440	3,200	4,100	5,600	533.5	143	160	200	260	17.1	20.0	20.5	21.5
496		601	1,900	3,700	6,700	1,597.3	54	125	250	600	11.1	15.2	14.8	11.1
497		555	1,400	2,300	2,300	966.9	53	250	400	400	10.5	5.6	5.7	5.7
		446	1,100	2,400	2,900	1,849.4	32	220	500	600	13.9	5.0	4.8	4.8
		3,982	4,500	6,100	8,300	644.6	257	200	250	400	15.5	22.5	24.4	20.7
500		3,288	3,500	3,700	3,700	310.4	96	115	125	125	34.3	30.4	29.6	29.6
501		916	2,100	4,500	5,500	1,086.3	33	130	400	500	27.8	16.2	11.2	11.0
502		254	500	1,000	1,000	5,630.9	10	100	200	200	25.4	5.0	5.0	5.0
District 44		12,482	18,200	27,800	36,000	12,619.3	678	1,300	2,325	3,085				
503	45	559	2,000	6,400	6,400	6,038.1	7	220	700	700	79.9	9.1	9.1	9.1
504	45	3,037	3,200	3,500	3,700	358.1	128	130	140	210	23.7	24.6	25.0	31.9
505		2,257	3,400	4,800	9,800	1,203.9	86	150	250	500	26.2	22.6	19.2	19.6
506		216	1,500	3,700	7,200	1,544.5	16	110	275	550	13.5	13.6	13.5	13.1
District 45		6,069	10,100	18,400	30,100	9,144.6	237	610	1,365	1,960				
507	46	112	1,300	3,500	8,700	3,565.7	5	90	250	600	22.4	14.5	14.0	14.5
508		0	100	300	-	3,698.9	0	25	75	0	-	4.0	4.0	-
509		3	100	200	-	9,335.0	1	25	50	0	-	4.0	4.0	-
District 46		115	1,500	4,000	8,700	16,599.6	6	140	375	600				
510	47	0	0	0	0	386.1	0	0	0	0	-	-	-	-
511		454	3,500	7,400	5,400	300.0	35	110	180	180	13.0	31.8	41.1	30.0
512		3,324	4,700	5,600	5,400	452.0	196	230	280	280	17.0	20.4	20.0	19.2
513		0	0	0	0	1,920.0	0	0	0	0	-	-	-	-
514		0	0	0	0	686.0	0	0	0	0	-	-	-	-
515		18	100	5,000	5,000	552.1	2	10	100	100	9.0	10.0	50.0	50.0
District 47		3,796	8,300	18,000	15,800	4,296.2	233	350	560	560				
516	48	1,231	1,500	1,500	1,300	161.6	79	80	80	80	15.6	18.8	18.8	16.2
517		2,438	3,300	4,000	5,800	91.3	53	55	58	60	46.0	60.0	68.9	96.6
518		22	0	0	0	41.3	1	0	0	1	22.0	-	-	-
519		1,832	1,800	1,800	1,800	53.6	20	20	20	20	91.6	-	90.0	90.0
520		2,617	2,600	2,600	2,600	60.6	30	30	30	30	87.2	86.6	86.6	86.6
521		9,611	10,000	10,700	14,700	152.8	79	85	87	100	121.7	117.6	122.0	147.0
522		1,941	4,000	4,000	3,000	29.5	26	35	24	24	74.2	114.3	166.7	125.0
523		1,211	2,800	2,800	2,100	175.4	79	85	85	85	15.3	32.9	32.9	24.7
524		3,543	7,500	7,900	7,900	74.4	53	60	60	60	66.8	125.0	131.6	131.6
525		5,263	6,200	6,700	6,700	119.8	26	65	70	70	202.4	95.7	95.7	95.7
526		1,854	2,600	3,500	1,800	39.8	26	24	22	22	71.3	108.3	159.1	81.8
527		2,546	4,700	4,900	4,900	147.3	27	48	50	50	94.3	98.0	98.0	98.0
528		3,882	4,600	5,000	5,000	151.5	53	53	53	53	73.2	86.7	94.3	94.3
529		570	1,300	1,700	4,500	50.5	27	27	27	27	21.1	48.1	62.9	166.6
530		1,456	1,700	2,000	5,000	170.7	141	143	145	150	10.3	118.9	13.8	33.3
531		3,109	3,100	3,100	3,000	498.2	141	141	141	155	22.0	21.9	21.9	19.3
532		2,841	4,200	5,800	2,900	156.6	56	70	80	80	50.7	60.0	72.5	36.2
District 48		45,967	61,900	68,000	73,000	2,174.9	917	1,021	1,032	1,067				

	Population				Land Area	Area				Densities			
	1964	1975	1985	GLUMP		1964	1975	1985	GLUMP	1964	1975	1985	GLUMP
533 49	435	500	600	0	53.0	8	8	8	25	54.4	62.5	75.0	-
534	2,742	2,900	3,000	1,900	200.0	113	113	110	110	24.3	25.7	27.3	17.1
535	1,955	2,200	2,400	2,400	231.9	113	124	135	135	17.3	17.7	17.7	17.1
536	2,686	3,400	4,500	5,300	492.2	242	260	250	270	11.1	13.1	17.3	19.6
537 49	2,043	8,000	9,100	5,200	137.7	48	75	80	80	42.6	106.7	113.8	65.0
District 49	9,861	17,000	19,600	14,800	1,114.8	524	580	593	620				
538 50	7,483	10,000	10,600	9,200	332.9	194	200	200	200	38.6	50.0	53.0	46.0
539	2,829	3,200	3,600	3,400	143.0	145	100	100	100	19.5	32.0	38.0	34.0
540	2,125	3,000	3,000	2,100	200.6	97	100	100	100	21.9	30.0	30.0	21.0
541	4,759	5,100	5,100	4,700	398.5	97	150	150	150	49.1	34.0	34.0	31.7
542	4,246	4,900	5,100	4,500	253.7	145	145	145	145	29.3	33.8	35.2	31.0
543	1,877	2,400	2,800	2,800	704.2	213	200	180	180	8.8	12.0	15.5	15.5
544	1,475	3,500	3,500	1,500	71.6	70	60	30	30	-	58.4	116.7	50.0
545	4,185	6,500	7,500	7,500	423.3	171	200	220	220	24.5	32.5	34.0	34.0
546	914	2,000	2,600	1,600	83.1	43	40	30	30	21.3	50.0	86.7	53.3
547	-	-	-	-	175.9	0	0	0	0	-	0	-	-
548	316	2,500	3,000	5,400	140.5	14	75	80	80	22.6	33.3	37.5	67.5
549	858	4,000	10,900	5,900	371.9	57	80	100	100	15.1	50.0	109.0	59.0
550	467	600	700	1,300	205.7	71	75	75	80	6.6	8.0	8.0	16.2
District 50	31,534	47,700	58,500	49,900	3,504.9	1,317	1,425	1,410	1,415				
Grand Totals	1,090,078	1,486,800	1,952,000	2,433,100	360,731.5	53,406	66,973	89,034	117,785				

Revised Zone Data In Accordance With Revised Zone Boundaries

Unit T.Z.	Resident Population				Total Land Area	Net	Residential Area				Population Density			
	1964	1975	1985	GLUMP			1964	1975	1985	GLUMP	1964	1975	1985	GLUMP
21	0	0	0	0	34.5	0	0	0	0	-	-	-	-	
76	3,031	3,200	5,200	5,200	180.0	42	50	60	60	72.2	64.0	86.7	86.7	
79	1,684	2,400	3,250	2,500	68.8	8	20	20	20	210.5	120.0	162.5	100.0	
80	1,684	2,400	3,250	2,000	68.9	9	20	20	20	187.1	120.0	162.5	100.0	
81	0	800	2,000	0	95.0	1	20	60	3	-	40.0	33.3	-	
141	3,511	4,300	4,800	5,500	305.7	138	138	138	100	25.4	31.2	34.8	55.0	
142	3,031	3,200	5,200	5,200	191.9	43	50	60	60	70.5	64.0	86.6	86.6	
344	1,831	4,400	5,300	5,100	676.7	352	380	425	420	5.2	11.6	12.5	12.1	
345	134	2,000	3,465	5,000	700.0	4	79	203	294	33.5	25.3	17.1	17.0	
397	2,150	2,900	3,960	5,700	697.8	61	114	233	336	35.3	25.4	17.0	17.0	
403	0	1,200	3,210	4,630	700.0	0	47	189	272	-	25.6	17.0	17.0	
404	0	0	1,000	2,700	6,970.9	0	0	70	180	-	-	14.3	15.0	
405	0	0	0	0	8,707.3	0	0	0	0	-	-	-	-	
406	250	1,500	2,965	4,270	700.0	7	60	175	248	35.8	25.0	17.0	17.2	
458	3,300	3,900	3,950	9,550	690.5	126	190	214	514	26.2	20.5	18.5	18.6	
459	700	1,500	4,150	10,700	649.2	47	73	191	490	14.9	20.6	21.8	21.8	
467	889	1,200	1,500	1,500	9,699.8	75	115	200	200	11.9	10.4	7.5	7.5	
468	305	1,600	3,450	3,900	640.0	21	77	159	410	14.5	20.8	21.7	21.7	
469	259	200	3,450	8,350	690.5	10	10	186	446	25.9	20.0	18.5	18.7	
514	18	100	5,000	5,000	1,038.0	2	10	100	100	9.0	10.0	50.0	50.0	
515	0	0	0	0	354.0	0	0	0	0	-	-	-	-	
Totals	22,777	36,800	65,100	91,300	33,859.5	946	1,453	2,703	4,173					



221	216	196	195	194	187	185	183	184	550						
252	253	225	222	220	217	197	198	192	191	188	178	182	181	549	
224	223	219	218	202	201	200	199	190	189	176	177	179	180	170	548
228	228	227	203	204	205	204	211	207	164	165	167	168	169	547	
229	230	231	213	212	214	215	210	209	162	161	154	155	156	545	544
234	233	232	214	215	133	134	135	151	152	153	154	155	543	544	
235	236	237	238	127	128	129	132	136	149	150	146	145	542	543	
243	242	241	241	126	127	129	130	131	137	148	147	144	541	538	
246	247	248	249	125	124	123	122	139	140	141	142	143	540	539	
288	303	296	297	109	110	111	112	113	114	119	120	536	537		
291	292	295	298	108	107	106	105	104	115	118	121	535	534	533	
289	290	293	294	300	098	099	100	101	102	103	116	117	532	531	
306	097	096	094	093	088	087	076	083	530	531	532	523	528	527	
307	095	092	090	085	086	084	082	081	529	528	527	525	524	523	
309	069	068	067	066	064	063	062	061	059	058	057	056	055	054	053
311	061	062	063	064	065	066	067	068	069	070	071	072	073	074	075
312	060	059	058	057	056	055	054	053	052	051	050	049	048	047	046
316	032	031	030	029	028	027	026	025	024	023	022	021	020	019	018
318	030	031	032	033	034	035	036	037	038	039	040	041	042	043	044
319	037	038	039	040	041	042	043	044	045	046	047	048	049	050	051
320	038	039	040	041	042	043	044	045	046	047	048	049	050	051	052
321	039	040	041	042	043	044	045	046	047	048	049	050	051	052	053
322	040	041	042	043	044	045	046	047	048	049	050	051	052	053	054
323	041	042	043	044	045	046	047	048	049	050	051	052	053	054	055
324	042	043	044	045	046	047	048	049	050	051	052	053	054	055	056
325	043	044	045	046	047	048	049	050	051	052	053	054	055	056	057
326	044	045	046	047	048	049	050	051	052	053	054	055	056	057	058
327	045	046	047	048	049	050	051	052	053	054	055	056	057	058	059
328	046	047	048	049	050	051	052	053	054	055	056	057	058	059	060
329	047	048	049	050	051	052	053	054	055	056	057	058	059	060	061
330	048	049	050	051	052	053	054	055	056	057	058	059	060	061	062
331	049	050	051	052	053	054	055	056	057	058	059	060	061	062	063
332	050	051	052	053	054	055	056	057	058	059	060	061	062	063	064
333	051	052	053	054	055	056	057	058	059	060	061	062	063	064	065
334	052	053	054	055	056	057	058	059	060	061	062	063	064	065	066
335	053	054	055	056	057	058	059	060	061	062	063	064	065	066	067
336	054	055	056	057	058	059	060	061	062	063	064	065	066	067	068
337	055	056	057	058	059	060	061	062	063	064	065	066	067	068	069
338	056	057	058	059	060	061	062	063	064	065	066	067	068	069	070
339	057	058	059	060	061	062	063	064	065	066	067	068	069	070	071
340	058	059	060	061	062	063	064	065	066	067	068	069	070	071	072
341	059	060	061	062	063	064	065	066	067	068	069	070	071	072	073
342	060	061	062	063	064	065	066	067	068	069	070	071	072	073	074
343	061	062	063	064	065	066	067	068	069	070	071	072	073	074	075
344	062	063	064	065	066	067	068	069	070	071	072	073	074	075	076
345	063	064	065	066	067	068	069	070	071	072	073	074	075	076	077
346	064	065	066	067	068	069	070	071	072	073	074	075	076	077	078
347	065	066	067	068	069	070	071	072	073	074	075	076	077	078	079
348	066	067	068	069	070	071	072	073	074	075	076	077	078	079	080
349	067	068	069	070	071	072	073	074	075	076	077	078	079	080	081
350	068	069	070	071	072	073	074	075	076	077	078	079	080	081	082
351	069	070	071	072	073	074	075	076	077	078	079	080	081	082	083
352	070	071	072	073	074	075	076	077	078	079	080	081	082	083	084
353	071	072	073	074	075	076	077	078	079	080	081	082	083	084	085
354	072	073	074	075	076	077	078	079	080	081	082	083	084	085	086
355	073	074	075	076	077	078	079	080	081	082	083	084	085	086	087
356	074	075	076	077	078	079	080	081	082	083	084	085	086	087	088
357	075	076	077	078	079	080	081	082	083	084	085	086	087	088	089
358	076	077	078	079	080	081	082	083	084	085	086	087	088	089	090
359	077	078	079	080	081	082	083	084	085	086	087	088	089	090	091
360	078	079	080	081	082	083	084	085	086	087	088	089	090	091	092
361	079	080	081	082	083	084	085	086	087	088	089	090	091	092	093
362	080	081	082	083	084	085	086	087	088	089	090	091	092	093	094
363	081	082	083	084	085	086	087	088	089	090	091	092	093	094	095
364	082	083	084	085	086	087	088	089	090	091	092	093	094	095	096
365	083	084	085	086	087	088	089	090	091	092	093	094	095	096	097
366	084	085	086	087	088	089	090	091	092	093	094	095	096	097	098
367	085	086	087	088	089	090	091	092	093	094	095	096	097	098	099
368	086	087	088	089	090	091	092	093	094	095	096	097	098	099	100
369	087	088	089	090	091	092	093	094	095	096	097	098	099	100	101
370	088	089	090	091	092	093	094	095	096	097	098	099	100	101	102
371	089	090	091	092	093	094	095	096	097	098	099	100	101	102	103
372	090	091	092	093	094	095	096	097	098	099	100	101	102	103	104
373	091	092	093	094	095	096	097	098	099	100	101	102	103	104	105
374	092	093	094	095	096	097	098	099	100	101	102	103	104	105	106
375	093	094	095	096	097	098	099	100	101	102	103	104	105	106	107
376	094	095	096	097	098	099	100	101	102	103	104	105	106	107	108
377	095	096	097	098	099	100	101	102	103	104	105	106	107	108	109
378	096	097	098	099	100	101	102	103	104	105	106	107	108	109	110
379	097	098	099	100	101	102	103	104	105	106	107	108	109	110	111
380	098	099	100	101	102	103	104	105	106	107	108	109	110	111	112
381	099	100	101	102	103	104	105	106	107	108	109	110	111	112	113
382	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
383	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
384	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116
385	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117
386	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
387	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
388	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
389	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121
390	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122
391	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123
392	110	111	112	113	114	115</									

APPENDIX C

LIST OF MUATS REPORTS

Before the elements of the Proposed Transportation Master Plan were prepared, technical reports were published by the Metropolitan Dade County Planning Department and the Florida Department of Transportation to assist in the development of recommendations for the Master Plan Elements. Only a limited supply of the technical reports were printed for internal use. Final reports were then prepared for each of the five plan elements. These reports, as well as a summary report, are available and have been distributed to public officials and community leaders.

TECHNICAL REPORTS

Study Design

March 1965

The study design provides the scope and methodology for a continuous program of collection and analysis of data and the formulation of plans in keeping with latest trends; a comprehensive program taking into consideration all factors involved in land use and transportation planning; and a cooperative program of participation of all county and state agencies involved in the development of the metropolitan region

Prepared by Alan M. Voorhees and Associates, Planning and Transportation Consultants, McLean, Virginia for the Metropolitan Dade County Planning Department.

Goals for Transportation Planning

December 1968

Objectives and standards were established to guide the future growth and development of Dade County's transportation system in keeping with the goals of the General Land Use Master Plan; that is, to promote efficiency and economy, health and safety, economic prosperity, and the amenities and conveniences.

Prepared by the Metropolitan Dade County Planning
Department.

Economic, Population and Land Use Factors for Transportation Planning

December 1968

Population and land use were projected indicating an increase in population to almost 2 million (1,955,000) by 1985 from 1,240,000 January 1969. School enrollment was forecast to about double in size from 1964 when the study began.

Personal income was projected at \$8½ billion, 3.4 times greater than the \$2½ billion in 1964. Automobile registration was forecast at 1 million in 1985 compared with 381,000 cars available to tourists and residents in 1964.

Prepared by the Metropolitan Dade County Planning
Department.

Community Attitudes for Transportation Planning

September 1968

The features most liked and disliked at the metropolitan and neighborhood level were ascertained by a sampling of citizens. Results indicated the county as a whole liked least the transit service, lack of job opportunities, and low wages. Dade County's climate ranked as the best feature followed by the county's general appearance, educational facilities, and shopping areas.

Prepared by the Metropolitan Dade County Planning
Department.

Commercial Model Development for Transportation Planning

November 1968

Nine regional shopping centers and 32 community shopping centers were located radiating from the central business district to serve as the framework for the commercial structure of Dade County in 1985. Development of a commercial model indicated regional shopping center retail sales would total \$483.7 million in 1985 compared with \$149.4 million in 1963.

Prepared by the Metropolitan Dade County Planning
Department.

Laws and Ordinances

October 1968

An inventory of existing laws and ordinances relating to transportation was undertaken and recommendations were made for the passage of local and state legislation to provide more funds and greater freedom of transportation planning for local governments; and for the county to adopt a land development ordinance with specific standards for transportation facilities and to test the authority to pass an Official Map Act to give the county power to designate the right-of-way for highways and rapid transit in advance of need to keep costs down.

Prepared by the Metropolitan Dade County Planning Department.

Cost and Revenues for Highways and Mass Transportation

December 1969

Recommendations were developed for source of funds, priorities, and method of financing of the highway and transit elements of the Transportation Master Plan.

Prepared by the Metropolitan Dade County Planning Department.

Transit Cost Allocation Model Development

July 1967

Operating expense accounts of the Metropolitan Dade County Transit Authority were analyzed to develop a formula for relating route operating characteristics, including vehicle miles, vehicle hours, peak vehicle needs and passenger revenue to the average cost of route operation. This formula will be applied to future transit system alternatives to estimate operating costs for each alternate system. The memorandum also includes a revenue/cost analysis for each of the existing MTA routes.

Prepared by Simpson and Curtin, Transportation Engineers, Philadelphia, Pennsylvania, for the Metropolitan Dade County Planning Department.

Evaluation of Present Transit Services

August 1968

Existing transit service was evaluated for the purpose of establishing standards of coverage, frequency of service, directness of service, and other service characteristics to judge existing operations and establish goals for the future mass transit master plan.

Prepared by Simpson and Curtin, Transportation Engineers, Philadelphia, Pennsylvania for the Metropolitan Dade County Planning Department.

Corridors for Transit Improvements

July 1968

Corridors of movement within Dade County which appear to justify improved transit service were identified. A grade-separated rapid transit system is developed to meet anticipated volumes of 1985 movement. Alternative systems are also developed including a "do-nothing" bus system and bus rapid transit.

Prepared by Simpson and Curtin, Transportation Engineers, Philadelphia, Pennsylvania, for the Metropolitan Dade County Planning Department.

Route, System Design, Cost Estimates for Rapid Transit

August 1968

Routes, design, and cost for a rapid transit system were examined for the alternative plans identified in the transit study. Data was presented for the fixed rapid transit links in Miami Beach and the mainland. The cost of a busway development in the FEC corridor was also determined. General engineering details were also included.

Prepared by Henry J. Kaiser Company, Engineers, Oakland, California, for Simpson and Curtin.

Forms of Mass Transportation

May 1968

Existing and new forms of mass transportation were evaluated and details presented on their state of development, operating characteristics, geometric design characteristics and other facts relating to the selection of a mass transit system to meet projected travel needs in Dade County.

Prepared by Simpson and Curtin, Transportation Engineers, Philadelphia, Pennsylvania, for the Metropolitan Dade County Planning Department.

Evaluation of Alternate Transit Plans

August 1968

Future transit systems developed in the corridor's report were evaluated with regard to the revenues to be derived from each alternate as compared with capital and operating expenses under each plan. In addition to revenue/cost analysis, community benefits to be derived from improved transit services are discussed.

Prepared by Simpson and Curtin, Transportation Engineers, for the Metropolitan Dade County Planning Department.

Continuing Program for Transportation Planning

October 1968

MUATS is the beginning of a continuing joint effort of the county, state, and Federal Government to evaluate the transportation needs of the area in terms of land use and technological changes. This report recommends the organization and administrative responsibilities of the different agencies responsible for the transportation planning.

Prepared by the Metropolitan Dade County Planning Department.

Traffic Data Collection

August 1964

The MUATS study area was divided into 550 traffic zones. An Origin and Destination Study was conducted among automobile, truck, and transit drivers and riders to determine the time of day, route traveled, occupation of traveler, and purpose and destination of trip.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Data Processing and Tabulating

June 1966

Information was fed to computers to develop an extensive data bank with in-depth understanding of travel patterns and travel characteristics.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Development of Travel Models

August 1968

Development and testing of mathematical models which were used for estimating person travel are discussed in detail for the Miami Urban Area Transportation Study.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Development and Testing of Modal Split Models

July 1968

Development and testing of mathematical equations which were used in MUATS for estimating the "modal split" of travel between transit and highway modes is discussed in detail.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Highway Program—Cost and Financing

October 1968

Detailed studies were made to determine costs of the recommended street and highway network. Methods of financing the highway program were recommended.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Development of the Recommended 1985 Principal Street Plan

October 1968

Technical procedures used in testing and evaluating alternate street and highway plans are discussed in detail. The final principal street plan which is estimated to meet 1985 travel demands is presented.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Growth Projections

August 1968

Growth factors developed by the Metropolitan Dade County Planning Department are described. The use of these factors as inputs for computer projections of future travel demands is demonstrated.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

MASTER PLAN REPORTS

The Principal Street and Highway Plan - 1985

April 1969

This report summarizes the development of a future highway master plan which will solve the traffic problems of today and avoid those problems of tomorrow by recommending a system of expressways, arterials and collector streets which relate to projected travel demands in Metropolitan Dade County. The highway system is also related to the travel requirements of transit, airports, terminals, and seaports to form a well balanced transportation system for the metropolitan area. The process is subject to a continuing planning program taking into consideration changing trends and technological developments.

Prepared by Mel Conner and Associates, Consulting Engineers, for the Florida Department of Transportation.

Public Transit Master Plan

January 1969

This transit study examines current transportation patrons and charts an overall plan to satisfy future needs and demands. The Master Plan is founded upon detailed analyses of present factors—cost determinants, service standards, travel corridors, rider characteristics, mass transportation vehicular technology. Comparable analyses of future transit alternatives determine feasible options for Dade County. A rapid transit solution to future travel demand—a 67-mile network, both grade-separated and limited access busway—and/or extension of present bus services are measured and evaluated.

Prepared by Simpson and Curtin, Transportation Engineers, Philadelphia, Pennsylvania, for the Metropolitan Dade County Planning Department.

Airport Master Plan

December 1968

This report analyzes the needs of air transportation in Dade County in terms of use of airspace, ground accessibility to airports and interrelationship between the air transportation system and the metropolitan area. Projections of total number of commercial passengers yearly up to 1985, tons of cargo and operations of general aviation provided the base for recommending a system of airports for 1985.

Prepared by the Metropolitan Dade County Planning Department.

Terminal Facilities Master Plan

December 1968

This report defines the objectives for this part of the transportation system, analyzes the needs for facilities and services up to 1985, and recommends improvements in the terminal system that will serve efficiently the Dade County population in 1985 and in the intermediate stage of 1975. It evaluates terminal facilities including parking facilities in critical areas and facilities involved in change in mode of transportation of either persons or goods from a general land use point of view as well as from a transportation point of view. Water terminals are discussed in the

Seaports and Waterways Master Plan and air terminals in the Airports Master Plan.

Prepared by the Metropolitan Dade County Planning Department.

Seaports and Waterways Master Plan

December 1968

The purpose of the Seaports and Waterways Master Plan is to present a plan for ports and major waterways in Metropolitan Dade County which will be related to the other master plans in the context of MUATS. The master plan deals with the Port of Miami, the Miami River and other major waterway transportation arteries. No consideration is given to the recreational aspects of waterway development. The Port of Miami has been considered in a metropolitan context as part of the larger Southeast Florida region known as the "Gold Coast," encompassing the counties of Dade, Broward, and Palm Beach. Port activity is analyzed and projected to the year 1985.

Prepared by the Metropolitan Dade County Planning Department.

Proposed Transportation Master Plan for Metropolitan Dade County, A. Summary

February 1969

This report presents a brief summary of the major findings of the five elements of the comprehensive transportation master plan for Metropolitan Dade County. Recommendations for all transportation facilities are discussed, means of financing the highway and transit facilities are reviewed and the necessary steps to carry out the plan are outlined.

Prepared by the Metropolitan Dade County Planning Department.

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ATTITUDES FOR
TRANSPORTATION PLANNING**

**MIAMI URBAN AREA TRANSPORTATION STUDY
METROPOLITAN DADE COUNTY, FLORIDA**

transportation

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TITLE: Miami Urban Area Transportation Study:
Community Attitudes for Transportation
Planning

AUTHOR: Metropolitan Dade County Planning Department

SUBJECT: The Results and Analysis of a County-Wide
Attitudinal Survey

DATE: September 1968

LOCAL PLANNING
AGENCY: Metropolitan Dade County Planning Department

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ABSTRACT:

This report examines and analyzes the results of a county-wide attitudinal survey conducted at the same time origin and destination home interviews were made for the Miami Urban Area Transportation Study. Five per cent of all the households in Metropolitan Dade County were covered by the O-D study. The questions in the attitudinal survey were keyed to the respondents' residence, neighborhood, and general area. This report summarizes which services and facilities are liked and disliked the most on a local and metropolitan area basis.

The answers to these questions were correlated with the distance from each respondent's residence to the facility in question, and the results are summarized in tabular form. Questions regarding housing and leisure-time activities are also summarized.

At the metropolitan level, general appearance, educational facilities and shopping areas are most liked by residents, with Dade County's climate emerging as its best feature. Transit service, lack of job opportunities and low wages are felt to be the area's worst features.

Schools, shopping areas and general neighborhood appearance are the features best liked at the local level. Local transportation service is considered to be poor, as were local libraries and neighborhood parks.

The most important factor in selecting a particular residence is cost, and the most important factor in the selection of a particular neighborhood is proximity to shopping areas. Most people feel the size of their house and lot to be adequate, although many feel there is insufficient distance between them and their neighbors. A majority of respondents indicate preference for single-family housing, with only a few desiring apartments. South Dade County is the area most desired as a place in which to live, yet more people in South Dade wish to move than residents in other areas of the County.

More time is spent watching television than any other single leisure-time activity. Driving for pleasure consumes more time than all forms of sports. Water-oriented sports are very popular among Dade County residents.

COMMUNITY ATTITUDES FOR TRANSPORTATION PLANNING

Prepared By

The Metropolitan Dade County Planning Department for
the Miami Urban Area Transportation Study
702 Justice Building
1351 N.W. 12th Street
Miami, Florida 33125

September 1968

The preparation of this report was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

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WATER CONTROL
CONSERVATION AREA #3

MUATS STUDY AREA

EVERGLADES
NATIONAL
PARK



1968 BASE MAP
SCALE
0 1 2
IN MILES



PREFACE

This is one of several background reports related to the inventory and projection of socio-economic characteristics within the context of the Miami Urban Area Transportation Study. MUATS is a joint effort of Metropolitan Dade County and the State of Florida in cooperation with the Department of Transportation's Bureau of Public Roads and the Department of Housing and Urban Development. Other reports in the background series provide data on economic factors affecting development, population projections, and land use activities and projections. These background studies provide the basic data inputs for the preparation of the principal elements of the MUATS program, which include metropolitan master plans for Streets and Highways, Terminal Facilities, Airports, Waterports and Waterways, and Mass Transit.

These background reports (1) present the findings of major study phases as they relate to the planning of all elements of transportation facilities in the Miami area and serve to advise the MUATS Technical Advisory Committee, Policy Committee, and other concerned persons of the technical details of the analysis being conducted in the urban area transportation study by Metropolitan

Dade County and its consultants. Community Attitudes for Transportation Planning evaluates the results of an attempt to determine how people in Metropolitan Dade County feel about their living areas, transportation, and community services and facilities at both the neighborhood and community levels. Questions concerning the location, cost and size of housing were included to provide an insight into living patterns of the area. Recreational characteristics were examined to help determine how mobile people in areas throughout Dade County tend to be.

(1) See Appendix for a list of reports in this series

SUMMARY

At the metropolitan level, the features most liked by residents were the general appearance, educational facilities and shopping areas. Dade County's climate was ranked as the best feature, reflecting the desire of residents to spend considerable leisure time out-of-doors. The features liked the least were the transit service, lack of job opportunities and low wages.

The situation differed slightly at the neighborhood level. Again, schools, shopping areas and general neighborhood appearance were regarded favorably. Local transportation service, however, was considered poor, although people were generally satisfied with the distance they had to travel to shopping areas. Residents were least satisfied with the distance they had to go to reach bus lines. Dissatisfaction was also evident over street conditions, neighborhood parks and libraries, which were generally rated as inadequate.

Cost was the most important factor in selecting a house or apartment followed by size, design and appearance of the house or apartment. Convenience to shopping areas was the major criteria for selecting a particular neighborhood, followed respectively by the general type of residential development and proximity to employment.

Transportation ranked low as a criteria for selecting a neighborhood.

While most people in Dade County believed the size of their house and lot were adequate, many felt there was not enough distance between neighbors. This related to the strong desires expressed for privacy and quiet in residential neighborhoods.

A majority of residents answering the planning questionnaire indicated they would like to live in single-family residential dwellings. Only a small percentage desired apartments and townhouses. Yet, people today are moving into apartments in greater numbers, with between one-half and two-thirds of all residential construction going into apartments between 1964 and 1967, and the vacancy ratio then as now is at an all-time low.

Almost half of all residents said they planned to move within the next few years. More than half of the residents living in apartments indicated a similar desire. More people wanted to live in South Dade than anywhere else in Dade County, but more people living in South Dade were considering moving than residents in other areas of the county.

People spent more leisure time watching television than any other single activity. Activities with children, related activities, reading and educational pursuits rated closely behind this. Driving for pleasure consumed more time than all forms of sports.

BACKGROUND

A survey was conducted among residents of Dade County in the spring of 1964 to learn more about individual values and social attitudes. Questions were asked, with the objective in mind, of obtaining answers to serve as a guide for evaluating, and if necessary, revising Metropolitan Dade County's existing objectives and standards, and for recommending policies for future development. A planning questionnaire was developed and distributed by the MUATS organization at the same time home interviews were being conducted for the origin-destination study. A 5 per cent sample of housing units was selected throughout the metropolitan area for use in both surveys. However, the planning questionnaire was returned voluntarily.

Of the forms left at some 15,000 homes, 5,000 were returned. Of these 5,000 questionnaires, 3,300 were usable for tabulating purposes. Although this response is statistically a small sample of the county as a whole, the information is usable in making judgments concerning attitudes. The survey is not representative of all the people in the metropolitan area, however. In the report of the survey, an average of attitudes has been used based upon returns. The

reader should keep in mind that these samples do not represent a total population cross-section, but instead are more representative of the community-conscious people of the county.

Responses came from a greater proportion of married and a greater proportion of professional people than existed in Dade County as a whole in 1964, possibly indicating that married and professional people take more interest in the community than single or non-professional people.

Only 17.5 per cent of the returns were from single people, but the 1960 Census of Population indicated some 29 per cent of the residents were single. Since the greater number of occupants in apartments are young-marrieds or single persons, it is apparent that the apartment dweller did not respond to the survey of attitudes as readily as did the single-family resident. Similarly, the returns from minority and low-income groups did not reflect their proportion of the county's population.

The questions were keyed to the county, the neighborhood, and the residence in which the interviewee lived. In addition, questions were asked pertaining to leisure-time activities and preferences. Some questions

were multiple-choice and others were write-in to provide a cross-check of answers.

People were asked why they selected the house or apartment and neighborhood in which they lived. They were asked where and in what type of residence they preferred to live.

Interviewees were given an opportunity to rate the facilities or services in their immediate neighborhood and in the county as a whole. They were asked what they liked most and least about their neighborhood and Dade County.

The question of distances to facilities was rated as satisfactory or dissatisfactory and further tabulated in relation to exact distances the interviewee lived from the facilities.

Respondents were asked to indicate the number of hours they spent the previous day and the previous weekend participating in various leisure-time activities. In addition, they were given an opportunity to write down three favorite leisure-time activities. They were asked where they spent their vacations, which major recreational facilities they visited, and which facilities should be improved.

COUNTY-WIDE CONCERNS

Public educational facilities were rated as good more frequently than any other facility (by 54 per cent of the replies), with entertainment facilities and general appearance following closely. The feature rated the poorest by most people was job opportunity (43.4 per cent) followed by bus service and rail service.

These were the ratings given to nine different features of the county when citizens were asked to check good, fair, poor, or no opinion. Other features they were asked to judge were: street and highway facilities, recreational facilities, entertainment facilities, and county-wide cultural facilities (see Table 1).

Table 1 - County-wide Facilities Rated Good, Fair, Poor, or No Opinion, Dade County, Fla., 1964

<u>County-wide Features</u>	<u>Opinions</u>			
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>No Opinion</u>
	(percent)			
Bus service	26.3	27.7	32.6	13.4
Rail service	11.3	15.6	31.4	41.7
Street and highways	37.8	42.2	16.0	4.0
Recreation	42.6	29.2	19.5	8.7
Entertainment	46.4	26.5	16.3	10.8
Cultural facilities	38.1	29.7	15.5	16.7
Public education	54.0	25.1	8.3	12.6
Job opportunities	12.1	29.9	43.4	14.6
General appearance	39.7	46.7	9.8	3.8

Climate was considered the feature residents liked the most in Dade County, according to a write-in question used to serve as a double-check against the previous listing of features and facilities for rating. Other facilities and features were liked in the following order: recreation, convenience, expressways, landscaping, beaches, and the shopping centers.

Respondents indicated the greatest dislike for traffic followed by transit service, street conditions, slums, government, job opportunities and wages.

The most important problems facing Metropolitan Dade County according to another question provided for a write-in answer were job opportunities and wages, followed by mass transit, government and traffic.

NEIGHBORHOOD

Shopping centers were rated as good more frequently than any other facility or service in the immediate neighborhood (by 70.6 per cent of the respondents), followed by elementary schools and general appearance.

The feature rated the worst most frequently was transit service (by 34.2 per cent of the replies), followed by parks, and street and sidewalk conditions, street and sidewalk maintenance, libraries and playgrounds.

These were the ratings given to 11 different features within the immediate neighborhood by citizens asked to rate the facilities as good, fair, poor, or no opinion. The facilities or features under consideration were: elementary schools, junior high schools, high schools, libraries, playgrounds, parks, shopping areas, transit service, street and sidewalk conditions, street and sidewalk maintenance, and general appearance (see Table 2).

Table 2 - Neighborhood Features Rated Good, Fair, Poor, or No Opinion, Dade County, Fla., 1964

<u>Neighborhood Features</u>	<u>Opinions</u>			
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>No Opinion</u>
	(percent)			
Elementary schools	66.8	10.5	2.9	19.8
Junior high schools	54.5	14.3	5.8	25.4
Senior high schools	54.0	11.9	8.0	26.1
Library	42.8	13.5	26.3	17.4
Playground	40.3	15.5	26.2	18.0
Park	39.9	13.0	31.6	15.5
Shopping area	70.6	18.8	8.9	1.7
Transit service	37.6	19.2	34.2	9.0
Street and sidewalk condition	44.0	26.2	27.7	2.1
Street and sidewalk maintenance	42.6	27.2	25.7	4.5
General appearance	53.0	35.9	9.6	1.5

An analysis of the responses by municipality and unincorporated area indicates the people in Miami Beach were most satisfied with parks and those in Coral Gables and the west, least satisfied. On the other hand, Miami and Miami Beach were most satisfied with transit service while South Dade and North Dade were most dissatisfied.

Respondents, as a whole, indicated the greatest dislike for traffic, followed by noise, sidewalk conditions or lack of sidewalks, according to a write-in question. Convenience was considered the most liked feature of the neighborhood in which the respondent lived followed by these write-in answers: quiet, neighbors, atmosphere, and shopping areas.

Suggestions were written in for improvement of streets and lighting more than any other facility. This was followed in order by street conditions and design, sidewalks, water and sewers, transit and condition of homes.

Residents were most satisfied with the distance to the shopping area (84.6 per cent of replies), followed by elementary school. They were least satisfied with the distance to the transit service (32.9 per cent of responses), followed by distance to the park, library and playground.

When correlations were made relating the satisfactory or unsatisfactory response to the actual distance the interviewee lived from the facility, shopping areas appeared satisfactory as long as they were not more than $3\frac{1}{2}$ miles from the residence. The distance for junior high schools was 3 miles, elementary and senior high schools, $2\frac{1}{2}$ miles, library 2 miles, playgrounds and parks, 1 mile, and the transit service, one-half mile (see Fig. 1, Tables 3 and 4).

FIGURE 1 - PERCENT SATISFIED WITH DISTANCE OF RESIDENCE TO SHOPPING AREAS, TRANSIT LINES, PARKS, PLAYGROUNDS, LIBRARIES, AND SCHOOLS, DADE COUNTY, FLORIDA, 1964.

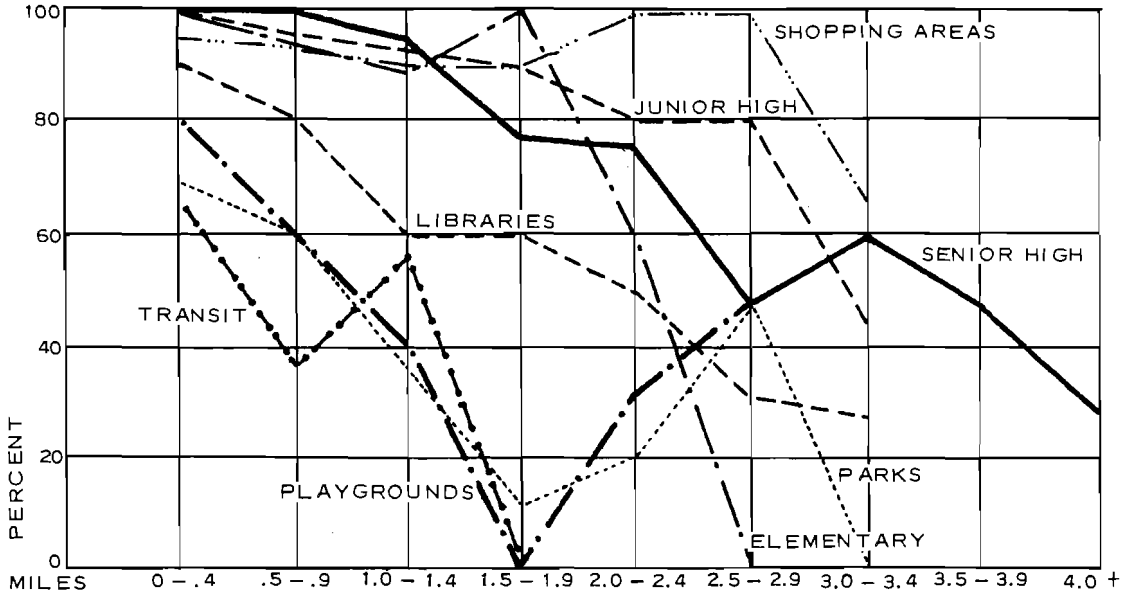


Table 3 - Satisfaction With Distance of Feature From Residence, Dade County, Fla., 1964

<u>Feature</u>	<u>Satisfied With Distance From Residence</u>		
	<u>Yes</u>	<u>No</u>	<u>No Opinion</u>
			(percent)
Elementary schools	72.6	4.7	22.7
Junior high schools	62.2	11.5	26.3
Senior high schools	56.5	16.9	26.6
Library	52.7	29.1	18.2
Playground	50.0	27.8	22.2
Shopping area	84.6	12.4	3.0
Transit service	55.1	32.9	12.0

Table 4 - Distance of Residence to Facilities Correlated With Satisfaction, Dade County, Fla., 1964

<u>Facilities and Responses</u>	<u>Distance From Residences to Facilities in Miles</u>										
	<u>0.0-0.4</u>	<u>0.5-0.9</u>	<u>1.0-1.4</u>	<u>1.5-1.9</u>	<u>2.0-2.4</u>	<u>2.5-2.9</u>	<u>3.0-3.4</u>	<u>3.5-3.9</u>	<u>4.0-4.4</u>	<u>4.5-4.9</u>	<u>5.0-Over</u>
Elementary schools											
Satisfied	50	62	15	7	3	0	0	-	-	-	-
Dissatisfied	0	2	2	0	2	1	2	-	-	-	-
Junior high schools											
Satisfied	9	39	30	20	11	4	3	-	-	-	-
Dissatisfied	0	2	3	4	3	1	4	-	-	-	-
Senior high schools											
Satisfied	11	28	20	19	13	5	3	1	0	0	4
Dissatisfied	0	0	1	6	5	5	2	1	4	3	4
Libraries											
Satisfied	9	27	22	13	6	3	8	-	-	-	-
Dissatisfied	1	6	15	9	6	7	25	-	-	-	-
Playgrounds											
Satisfied	44	30	9	0	1	1	-	-	-	-	-
Dissatisfied	12	19	14	6	2	1	-	-	-	-	-
Parks											
Satisfied	31	33	10	1	1	1	0	-	-	-	-
Dissatisfied	14	23	19	8	4	1	2	-	-	-	-
Shopping areas											
Satisfied	30	50	36	31	14	4	5	-	-	-	-
Dissatisfied	1	3	5	4	0	0	3	-	-	-	-
Transit											
Satisfied	75	8	4	0	1	0	0	-	-	-	-
Dissatisfied	36	14	3	3	0	1	12	-	-	-	-

When interviewees were asked the major reason for selecting a particular neighborhood in which to live, general appearance of the neighborhood was the most frequently answered (16.3 per cent of the responses), followed by good shopping and type of residential development. Of least importance was good recreational facilities (3.5 per cent of replies).

Other choices listed in the questionnaire were: near job, good transportation, good schools, reputation of area, near friends or family and other (see Table 5).

Table 5 - Reasons Cited for Selecting Neighborhood in Which to Live, Dade County, Fla., 1964

<u>Major Reason for Selecting Neighborhood</u>	<u>Percent</u>
General appearance	16.3
Good shopping	12.7
Type of residential development	11.9
Near job	11.8
Good schools	10.9
Good transportation	8.5
Reputation of area	8.2
Near friends or family	7.7
Good recreational facilities	3.5
Other	8.5

By community, Miami Beach, North Dade, and Coral Gables and the west residents said they made selections based primarily upon general appearance. But, in Hialeah and Miami Springs, nearness to the job rated more important, and in Miami, good transportation.

HOUSING

Cost was the most important factor in selecting a particular house or apartment (36.4 per cent of responses). Next in importance was the size of the house or apartment, followed by appearance (see Table 6). Only in Miami Beach did general appearance rank first.

Table 6 - Reasons Cited for Selecting Residence, Dade County, Fla., 1964

<u>Reasons for Selecting Residence</u>	<u>Percent</u>
Cost	36.4
Size of house or apartment	17.4
Design of house or apartment	12.0
Appearance of house or apartment	11.6
Size of yard	6.2
Only place available	4.7
Near or on water	3.5
Other	8.2

When residents were asked how they rated the home or apartment in which they lived regarding the size of the unit, front yard, back yard and side lot distance between them and the house next door, 37.5 per cent were dissatisfied with the side lot distance between the house and the house next door (see Table 7).

Table 7 - Percent of Satisfaction With Residence Size and Distance Between Neighbors, Dade County, Fla., 1964

<u>Residential Features</u>	<u>Satisfactory</u>	<u>Too Small</u>	<u>Too Large</u>
	(percent)		
Size of house or apartment	81.4	15.8	2.8
Size of front yard	88.8	10.0	1.2
Size of back yard	83.9	14.2	1.9
Side lot distance between your house and house next door	62.2	37.5	0.3

Some 43 per cent of all residents said they planned to move within the next few years. Among apartment dwellers, 56 per cent plan to move. Among all residents the desire to move was strongest in South Dade and lowest in Hialeah and Miami Springs. At the same time, respondents indicated a strong preference to move to South Dade followed by North Dade.

When respondents were asked what type of residence they preferred, 42 per cent said they would like to live in a single home on a lot of a half acre or larger. Single home preferences totaled 85 per cent compared to 14 per cent for apartments and 1 per cent for townhouses. Among those who preferred apartment living, only 5 per cent preferred high-rises. Among the total living in apartments, 45 per cent wanted to live in single-family homes, and 18 per cent

in high-rises. In Miami Beach, 14 per cent of the interviewees preferred high-rise living and 80 per cent single-family homes.

Among apartment preferences, more people preferred duplexes than 3 - 4 family units, but more preferred high-rise and 4 or more unit garden-type apartments than duplexes or 3 - 4 family units (see Table 8).

Table 8 - Type of Residence Preferred, Dade County, Fla., 1964

<u>Type of Residence</u>	<u>Percent Preferred</u>
Single-family house on $\frac{1}{2}$ acre or more	42.0
Single-family house on 100 x 100 ft. lot	24.4
Single-family house on 75 x 100 ft. lot	18.6
Garden apartment	4.9
High-rise apartment	4.8
Two-family house	2.2
3 - 4 family house	1.8
Townhouse	1.3

LEISURE TIME

When residents were asked to write-in three favorite leisure-time activities, the most frequent answer was water sports followed by reading and sports on land. The recreation area visited the most frequently the month previous to the interview was Crandon Park.

Replies to the question "What kind of public recreational facilities do you feel should be improved or added in our metropolitan area?" brought forth the need to improve sports facilities followed by playgrounds and neighborhood parks.

Most residents spent their vacations somewhere in Florida or at home (see Table 9).

Table 9 - Vacation Areas Last Selected, Dade County, Fla., 1964

<u>Last Vacation Area</u>	<u>Number of Responses</u>
Florida	484
At home	343
New York	279
North Carolina	218
Caribbean	129
Miami Beach	100
Miami	30

Although favorite leisure-time activities were water sports, more hours were spent the day before the interview and the weekend before the interview watching television. Reading or education and then activities with children followed for the preceeding day. For the previous weekend, activities with children and then reading or education followed in reverse order of the preceeding day leisure activities (see Table 10).

Table 10 - Week Day and Weekend Leisure Activities, Dade County, Fla., 1964

<u>Leisure Activity</u>	<u>Total Hours Yesterday</u>	<u>Percent</u>	<u>Hours Last Weekend</u>	<u>Percent</u>
Watching television	6099	16.4	13428	15.3
Reading or education	5527	14.9	10442	11.9
Activities with children	4234	11.4	11134	12.7
Listening to radio	3552	9.6	7183	8.2
Gardening or home improvement	3017	8.1	7178	8.2
Hobbies	2243	6.0	5591	6.4
Shopping	2185	5.9	4549	5.2
Visiting friends or relatives	2113	5.7	5816	6.6
Entertaining at home	1827	4.9	4768	5.4
Pleasure driving	923	2.5	2785	3.2
Church activities	873	2.4	2952	3.4
Outdoor sports	820	2.2	2890	3.3
Community and service work	719	1.9	1303	1.5
Indoor sports	513	1.4	972	1.1
Attending parties	490	1.3	1942	2.2
Seeing movies	497	1.3	1363	1.6
Attending theater, concert, etc.	433	1.2	787	0.9

FINDINGS

The findings of the social attitude survey will serve as a guide not only to transportation planners but to general planners of the area. The findings can be related to MUATS and in turn to the General Land Use Master Plan (GLUMP). Evaluations will be used as a basis for determining future county needs in light of the kind of transportation needed within a neighborhood, between communities, and within the urban and metropolitan area. The neighborhood, community, metropolitan area and urban area represent the differently sized service units used as a basis for planning land use in Dade County.

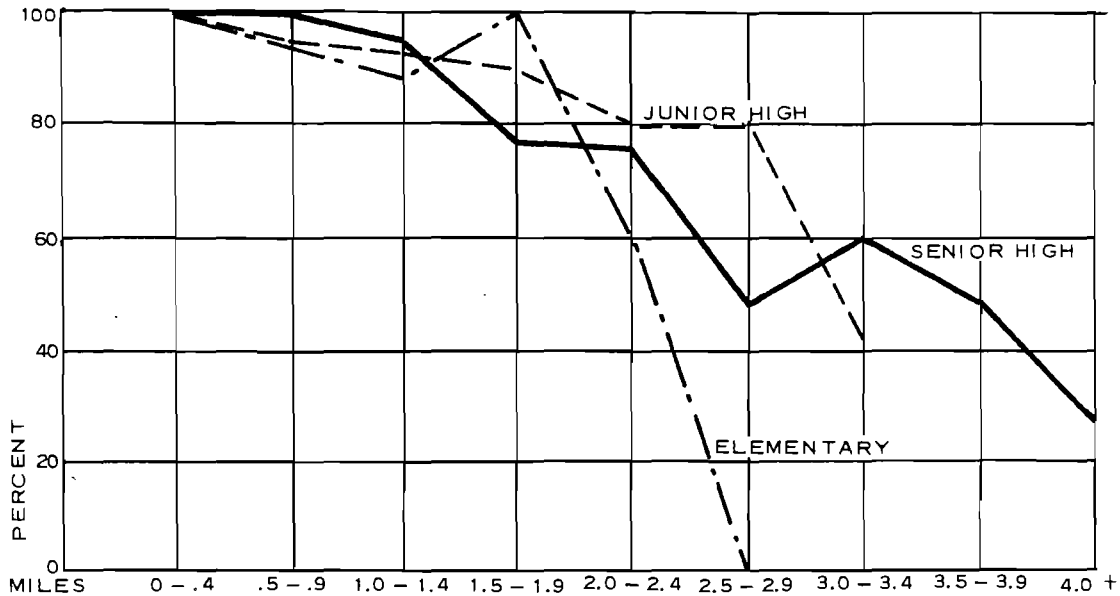
The survey provides important data to be considered in the linking and placement of services and facilities in relation to residential areas. Attention also was given to residential density.

The questionnaire provided citizens with an opportunity to present opinions pertaining to the quality of transportation available and the distance between residences and such facilities as schools, libraries, parks, playgrounds, and shopping centers. In addition, questions were asked about the kind of housing preferred.

The survey results indicated dissatisfaction with streets and street maintenance as well as sidewalks and sidewalk maintenance. Traffic circulation is an integral part of any land use plan; yet the findings reflect dissatisfaction with the flow, indicating that circulation is not up to the standards set by GLUMP. Views reflected the fact that major arterials are not able to handle large volumes at moderate speeds, and limited access highways are not able to handle large volumes at high speeds. MUATS will recommend the best means of solving these problems.

School standards apparently could be re-evaluated. Respondents indicated satisfaction with the distance of schools from residences up to three miles. However, GLUMP designated elementary schools as being effectively located when not more than one-half mile away from the residence; junior high schools one and one-quarter miles away and senior high schools one and one-half to two miles distant (see Fig. 2).

FIGURE 2 - PERCENT SATISFIED WITH DISTANCE OF ELEMENTARY, JUNIOR, AND SENIOR HIGH SCHOOLS, TO RESIDENCE, DADE COUNTY, FLORIDA, 1964.

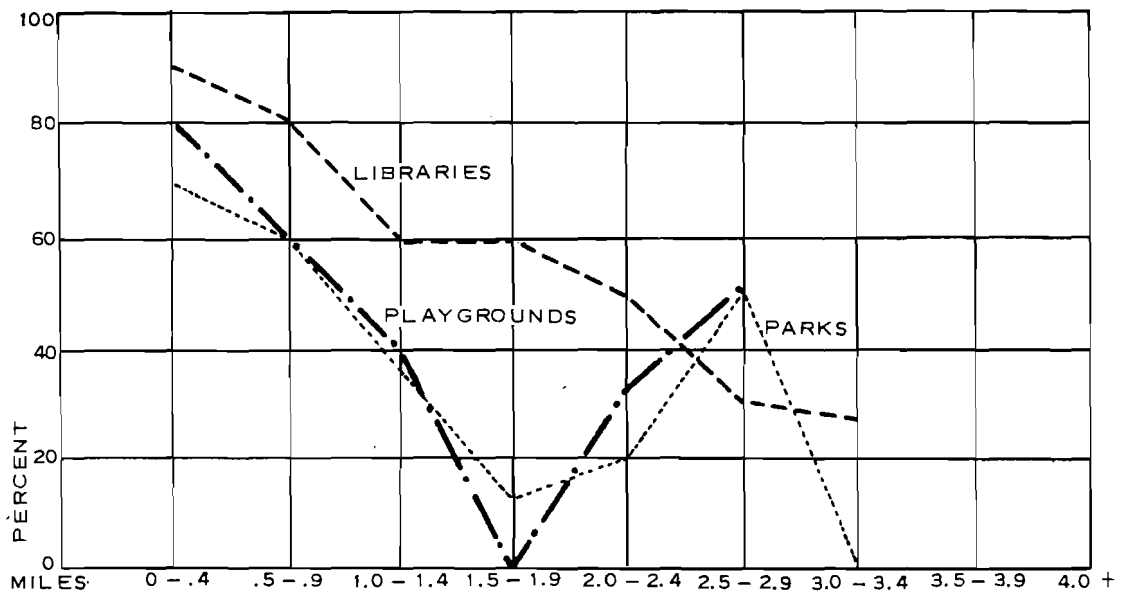


Libraries, according to GLUMP, have been designated as efficient if one and one-half to two miles distant for community libraries and four to six miles distant for regional libraries. Library standards, however, of two miles seem to be correct, according to the distance and satisfaction correlation of replies (see Fig. 3).

Neighborhood parks, like elementary schools, should not be more than one-half mile from a residence; playfields, one to two miles, and community parks, two miles away, according to the standards set forth in GLUMP. However,

correlation of satisfaction was at one mile, calling for possible reconsideration of standards (see Fig. 3).

FIGURE 3 - PERCENT SATISFIED WITH DISTANCE OF PARKS, PLAYGROUNDS, AND LIBRARIES TO RESIDENCE, DADE COUNTY, FLORIDA, 1964.



Shopping centers, according to master plan standards, should be of a neighborhood, community or regional nature. Neighborhood centers, which include a supermarket or drugstore, should be within one to one and a half miles from the residence: community centers, which include junior department or variety stores, should be within three to four miles, and regional centers containing one or two major department stores should be seven to eight miles from the residence (see Figure 4).

Community shopping center standards are correct within a three-mile distance. Preference for nearness to shopping centers, recreational and educational institutions, as well as nearness to job, re-emphasize the fact that the county should be developed into logical geographical units of sufficient size to support a full range of urban facilities and services.

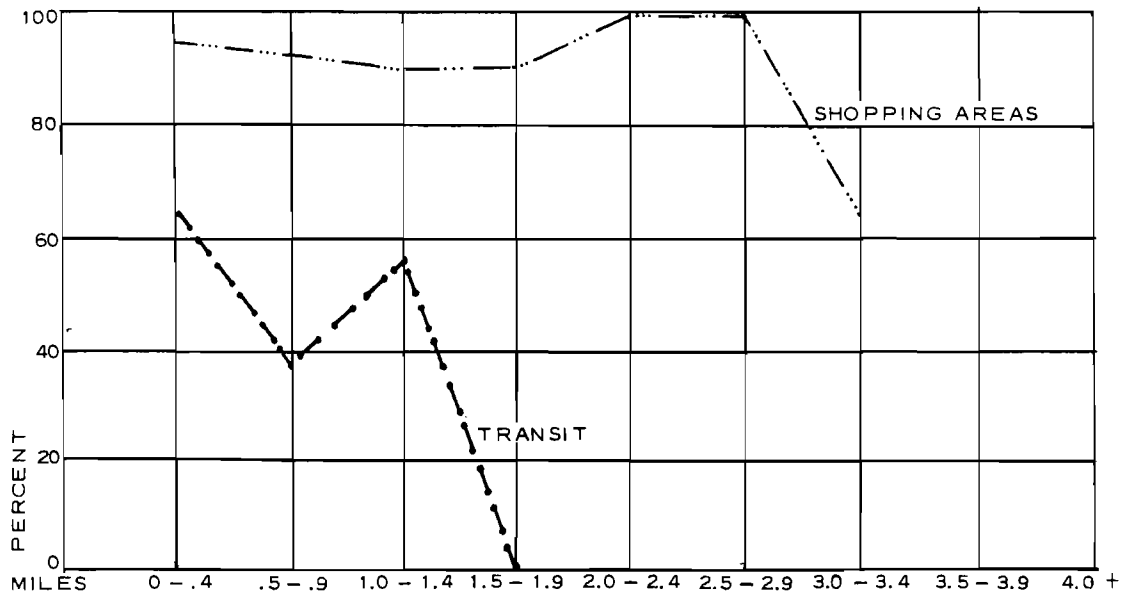
Residential densities may need re-evaluation to insure sufficient estate density zoning. Respondents indicated a strong preference for half-acre or larger lots. A review of the zoning regulations would be in order for areas where side yards are too narrow. The greatest complaint of homeowners who returned the questionnaire was the closeness of the house next door. The desire for privacy among respondents could have prompted the choice of larger lots. However, if such was the case, then consideration of design of housing and subdivisions could accomplish privacy on small lots. Varied setbacks to avoid windows facing one another and wall-patio houses are examples.

Transportation findings indicate dissatisfaction with the transit service in outlying areas and with streets, street maintenance, and sidewalk and sidewalk maintenance.

The National Committee on Urban Transportation recommends that transit lines be within one-quarter of a mile of the residence in the core area and one-half mile away in outlying areas. The Metropolitan Transit Authority (MTA) defines the core of Dade County as 125th Street on the north, the Atlantic Ocean on the east, the Palmetto Expressway on the west, and South Miami on the south. MTA meets the one-quarter mile standard in the core area, but does not always meet the one-half mile standard in the outlying areas.

Survey findings indicate that the transit availability standards of one-quarter mile in the core area are too high. Respondents indicated satisfaction at one-half mile. However, transit service was rated as poor in the outlying areas of the northern, southern, and western parts of the county. The service in these areas needs special examination (see Figure 4).

FIGURE 4 - PERCENT SATISFIED WITH DISTANCE OF SHOPPING AREAS, AND TRANSIT LINES TO RESIDENCE, DADE COUNTY, FLORIDA, 1964.



Thus, transportation, either public transit or streets and highways, provide the links between and within the service units of the county. It will be the responsibility of other reports of MUATS to determine the best possible way to serve these needs and meet the wishes of the people. Findings referring to schools, libraries, parks, shopping centers and residential densities will be discussed in reviewing GLUMP.

Although this survey does not present a complete picture of the feelings of all groups in Dade County, it is still highly useful for two main purposes. First, it indicates those values which people find most important in selecting a residence, neighborhood and area in which to live. Second, it indicates how they feel about the whole range of services offered them. This is particularly important in making future plans, because it indicates areas where the need is greatest and improvements needed.

With this information in hand, those responsible for planning for the growth of Dade County will be able to so tailor their planning efforts as to meet the needs and desires of the residents of Dade County.

APPENDIX

List of Reports in the Background Study Series for Transportation Planning:

- Economic Factors
- Population Projections
- Land Use Activities
- Community Attitudes
- Laws and Ordinances
- Goals, Standards and Policies
- Plan Implementation
- Commercial Model Development
- Continuing Program

A copy of the planning questionnaire used in the attitudinal survey is shown on the following pages.



PLANNING QUESTIONNAIRE

Metropolitan Dade County is carrying out an extensive planning study which will help your County make plans to meet the problems of future growth. You can help the County to meet your needs by filling in this questionnaire and mailing it in the attached envelope. (No postage is required.)

For
Official
Use
Only

Please check the appropriate box where there is a choice of answers.

Please do not put your name or address on this questionnaire. However, we would like to know if you are a:

Married Male Married Female Single Male Single Female

What were your major reasons for selecting a house/apartment in this particular neighborhood:

<input type="checkbox"/> Near job	<input type="checkbox"/> Good recreational facilities
<input type="checkbox"/> Good transportation	<input type="checkbox"/> Type of residential development
<input type="checkbox"/> Good shopping	<input type="checkbox"/> Reputation of the area
<input type="checkbox"/> Good schools	<input type="checkbox"/> Near friends - family
<input type="checkbox"/> General appearance	<input type="checkbox"/> Other (please specify)

What was your major reason for selecting this particular house/apartment?

<input type="checkbox"/> Cost	<input type="checkbox"/> Appearance of house
<input type="checkbox"/> Size of house/apt.	<input type="checkbox"/> Only place available
<input type="checkbox"/> Size of yard	<input type="checkbox"/> Near or on water
<input type="checkbox"/> Design of house	<input type="checkbox"/> Other (please specify)

How do you rate your present house/apt. with regard to the following features?

	<u>Satis-</u> <u>factory</u>	<u>Too</u> <u>Small</u>	<u>Too</u> <u>Large</u>
Size of house/apt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of front yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of back yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Side lot distance between your house and house next door	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is there any chance that you may decide to move within the next few years?

Yes No

If your answer is "Yes", in what part of the County would you prefer to live?

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In which type of residence from those listed below would you most like to live?

<input type="checkbox"/>	Single family house on ½ acre or more	<input type="checkbox"/>	Two family house
<input type="checkbox"/>	Single family house on 100 x 120 ft. lot	<input type="checkbox"/>	Garden apartment
<input type="checkbox"/>	Single family house on 75 x 100 ft. lot	<input type="checkbox"/>	3-4 family house
<input type="checkbox"/>	Town house	<input type="checkbox"/>	High-rise apartment

How do you rate the following facilities or services of your immediate neighborhood?

	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>No Opinion</u>	
Elementary schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Junior high schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transit service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Street and sidewalk condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Street and sidewalk maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What feature of your immediate neighborhood do you like the most?

	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

What feature of your immediate neighborhood do you dislike the most?

	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

In what ways do you believe your immediate neighborhood could be improved?

	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

How satisfied are you with the distance to your:

	<u>Satisfied</u>	<u>Dissatisfied</u>	<u>No Opinion</u>	
Elementary schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Junior high schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transit service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For
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What are your three favorite leisure-time activities?

1. _____ 2. _____ 3. _____

--	--

What major recreational area have you visited in the last month?

--	--

What kind of public recreational facilities do you feel should be improved or added in our metropolitan area?

--	--

Where did you spend your last vacation? _____

--	--

Please give the following information about the jobs the head of your household has had since 1960.

	City or Town and State	Year Started	Type of Job (Clerical, Sales, Man- agerial, etc.)	Main reason for job change (got better job, job completed, etc.)
--	------------------------------	-----------------	--	---

Where does he work now?	_____	_____	_____	_____
Where did he work before that?	_____	_____	_____	_____
Where did he work before that?	_____	_____	_____	_____
Where did he work before that?	_____	_____	_____	_____

Thank you very much for your assistance in our planning program. We will appreciate your returning the completed questionnaire in the enclosed self-addressed, postage-paid envelope.

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**MIAMI URBAN AREA TRANSPORTATION STUDY
METROPOLITAN DADE COUNTY, FLORIDA**

transportation

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Prepared By

The Metropolitan Dade County Planning Department for
the Miami Urban Area Transportation Study

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December 1968

The preparation of this report was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

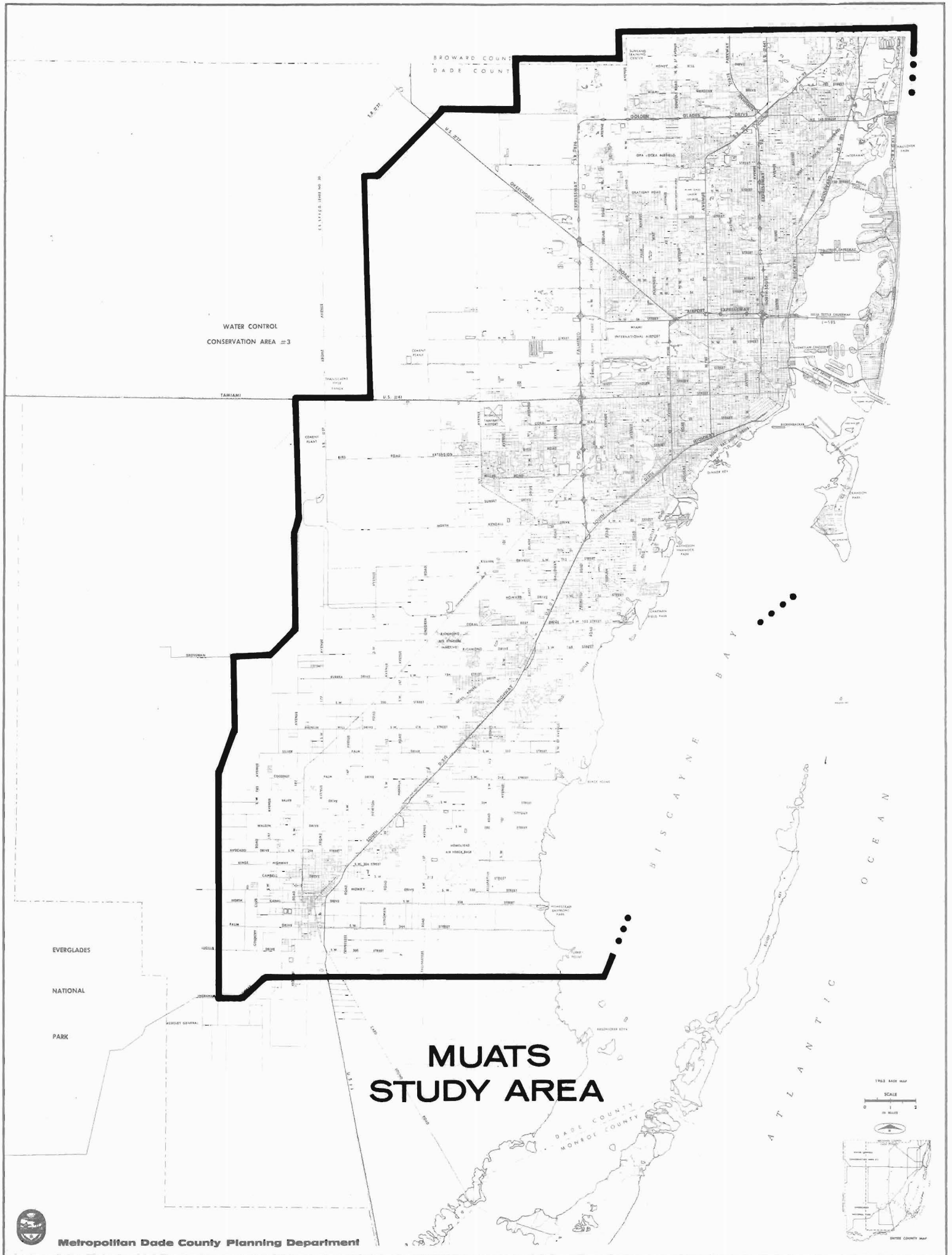
PREFACE

This is one of several background reports related to the inventory and projection of socio-economic characteristics within the context of the Miami Urban Area Transportation Study. MUATS is a joint effort of Metropolitan Dade County and the State of Florida in cooperation with the Department of Transportation's Bureau of Public Roads and the Department of Housing and Urban Development. Other reports in the background series provide data on economic factors affecting development, population projections, and land use activities and projections. These background studies provide the basic inputs for the preparation of the principal elements of the MUATS program, which include metropolitan master plans for Streets and Highways, Terminal Facilities, Airports, Seaports and Waterways, and Mass Transit.

The background reports⁽¹⁾ present the findings of major study phases as they relate to the planning of all elements of transportation facilities in the Miami area and serves to advise the MUATS Technical Advisory and Policy Committees, and other concerned persons of the technical details of the analysis being conducted in the urban area transportation study by Metropolitan Dade County and its consultants. Laws and Ordinances inventories legislation that affects transportation planning and operations in Dade County. This includes all levels of legislation - State, Federal, local and all special agencies and authorities created by legislation as well as local regulatory measures such as subdivision regulations and zoning ordinances. Recommendations are made for changes to permit improvement in Dade County's transportation system in accord with MUATS.

This report was prepared before the 1969 meeting of the Florida Legislature. The primary concern of this session was governmental reorganization, as called for in the new Constitution adopted in November 1968. Many of the recommendations made in this report relating to the reorganization of state transportation agencies (p. 23-24) were implemented during this session. Other changes in transportation planning laws and procedures recommended in this report were also implemented by the Legislature. These new laws are presented in a table to be found in Appendix B.

(1) See Appendix for a list of reports in this series.



BROWARD COUNTY
DADE COUNTY

WATER CONTROL
CONSERVATION AREA #3

TAMIAMI

EVERGLADES
NATIONAL
PARK

MUATS STUDY AREA

DADE COUNTY
MONROE COUNTY

1962 BASE MAP
SCALE
0 1 2
MILES



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SUMMARY

This report enumerates the laws, ordinances and regulatory measures which control transportation in Dade County. It also outlines changes or amendments which are felt to be necessary to implement the recommendations of the Proposed Transportation Master Plan prepared for Metropolitan Dade County as part of the Miami Urban Area Transportation Study.

An evaluation of existing State Constitutional Statutes and Legislative Statutes, local Charters, codes and ordinances, and Federal programs identified several areas in which changes are necessary if the comprehensive transportation plan is to be implemented.

Changes proposed at the State level include the following:

- . It is recommended that State transportation agencies and functions be as centralized as possible so that they might better respond to locally prepared comprehensive transportation plans. Specifically, it is recommended that the functions of the State Road Department related to highways in local areas be assumed by the newly-created State Department of Transportation.
- . It is recommended that the authority of the Public Service Commission be modified so that local transportation agencies have more control over local transportation systems.
- . It is recommended that the procedures of the Public Service Commission's public hearings in local areas be reviewed so that the testimony of locally elected officials and administrators will have greater weight on Public Service Commission decisions affecting local transportation systems.
- . It is recommended that Chapter 160, Florida Statutes, be amended so that lump sum payments can be made from local member jurisdictions to regional councils of government for comprehensive, long-range planning programs.
- . It is recommended that 80 percent of the fifth,

sixth, and seventh cents of the gasoline tax collected in counties be returned to these counties for local transportation needs.

- . It is recommended that the Florida State Road Department's pro rata share of the cost of government be reduced from \$4.3 million to \$225,000, freeing more than \$4 million for highway planning and construction programs.
- . It is recommended that proceeds from the sale of motor vehicle licenses go to the state roads trust fund for the purchase of primary road right-of-way after the requirements for county capital outlays and school trust fund debt service have been met.
- . It is recommended that entire parcels of land needed for highway and expressway right-of-way be purchased jointly by the State Road Department and local jurisdictions. The local jurisdiction would retain title to that part of the land not needed for actual right-of-way. This land could then be re-sold, either in separate lots or in combined lots, to private interests or used for public purposes.
- . It is recommended that an interdisciplinary approach be used to the planning of expressways through neighborhoods so that these facilities can be a stimulus to neighborhood renewal, and so that highways and expressways can be integrated into the neighborhood instead of fragmenting it.
- . It is recommended that court procedures be changed in right-of-way proceedings to prevent increases in land prices while litigation is in process.
- . It is recommended that attorneys' fees be based on the amount of gain made in right-of-way condemnation proceedings rather than leaving it the entire responsibility of the condemning authority.

Proposed changes in the local Charter, zoning ordinance and subdivision regulations include the following:

- . It is recommended that an ordinance be passed granting the Board of County Commissioners the power to control the municipal regulation of private transportation companies.
- . It is recommended that Article XIX, Dade County Code, be revised to permit the Metropolitan Transit Authority to receive subsidies from general county tax revenues.
- . It is recommended that a county-wide Land Use Ordinance be enacted which would deal specifically with the conditions under which development of all types, including the provision of transportation facilities, may proceed.
- . It is recommended that a Transportation Corridors Map Act be passed to permit advance designation of needed right-of-way. Prior to this, however, a determination should be made as to whether or not Dade County's Home Rule Charter permits enactment of this legislation at the local level. If it does not, every effort should be made to secure State enabling legislation to permit counties to engage in this activity.
- . It is recommended that the right-of-way widths set aside in Dade County along section and half-section lines be increased to 100-120 feet. At present, no change in the right-of-way widths for quarter-section and five-acre lines are needed.

Proposed changes in Federal grant-in-aid programs for transportation facilities include the following:

- . It is recommended that the Federal government participate in the funding and planning of rapid transit systems in urban areas.
- . It is recommended that the guidelines for Federal participation in local highway construction programs be reviewed by the appropriate Federal agencies in cooperation with state and local officials and administrators.

BACKGROUND

Laws and ordinances at various levels of government form the basic framework within which the planning and development of transportation facilities is done. These laws and ordinances must change as the demands placed on transportation facilities change. Without this flexibility, the laws and ordinances related to transportation can become a hinderance to the provision of these vital facilities.

The basic purpose of this report is to determine those transportation-related laws and ordinances that should be adopted or amended so that the recommendations of the Miami Urban Area Transportation Study (MUATS) can be implemented. In carrying out this purpose, an inventory of existing transportation-related laws and ordinances at State, Federal, and local levels was made, with particular emphasis on examining State enabling legislation to determine if there are other appropriate measures and laws that can be used to carry out the transportation planning program outlined in MUATS. Following this, deficiencies in these laws, as they relate to the needs of implementing MUATS, were identified, and recommendations for either new laws or amended existing statutes were made to correct these deficiencies. Proposals were also made relating to the best means of translating these recommendations into legal measures.

This report is organized into two basic sections; an inventory of existing laws and ordinances, and the recommendations necessary to correct the deficiencies found in these laws and ordinances. The inventory section contains transportation-related laws and ordinances found at State, Federal and local levels, and includes State Constitutional provisions and legislative acts, local Charter provisions, codes and regulations, and various Federal acts affecting transportation. The recommendations cover suggested changes at the State level involving enabling legislation, governmental reorganization, and Constitutional amendments. At the local level, they include suggested changes in the Home Rule Charter, and the zoning and subdivision regulations. At the Federal level, recommendations for continued funding of road projects, involvement in rapid transit funding, and a review of Federal grant-in-aid procedures are suggested.

FLORIDA CONSTITUTIONAL STATUTES

This section delineates those parts of the Constitution of the State of Florida which directly or indirectly pertain to the planning and provision of transportation facilities in Dade County. On November 5, 1968, a new Constitution was adopted by the people of Florida to replace the document that had been in force since 1885, although many sections of the old Constitution are retained through the many references to them made in the new Constitution. The major changes that affect transportation planning pertain to the way gasoline tax money is distributed to the counties and in the re-organization of the state government.

ARTICLE VIII - SECTION 6 - HOME RULE

Although this article is not directly related to transportation, it is the single most important article in the Florida Constitution as far as local government in Dade County is concerned. This article provides the legal basis for the Home Rule Charter under which Dade County, through its Board of County Commissioners, is governed. Under this article, the people of Dade County, are permitted to govern themselves, subject to certain limitations. As of this date, only Dade and Duval Counties have varying degrees of home rule powers granted them and approved by their residents.

ARTICLE IX - SECTION 12 - MUNICIPAL BONDING

Under this article, the governing body of a municipality, or in the case of Dade County, the Board of County Commissioners, may issue bonds to raise money. As this affects transportation, the money may be used to purchase capital equipment such as busses, to construct terminal facilities, or to match Federal funds for highway construction and many other uses. This may be done only after the proposal to issue bonds has been approved by a majority of the votes in an election in which a majority of all qualified voters participate.

ARTICLE XII - SECTION 9 - MOTOR VEHICLE FUEL TAXES

The new State Constitution changes the way gasoline taxes collected in Florida are allocated to counties. There is a

total of 11 cents tax on each gallon of gasoline. The first four cents automatically goes to the Federal government. Four of the remaining seven cents goes to the State Road Department for the construction of primary roads. This is unchanged from the old Constitution. Two cents of the remaining seven cents is allocated to the counties based on a formula as follows: one-fourth in the ratio of county area to state area, one-fourth in the ratio of total county population to state population, and one-half in ratio of the total secondary gas tax collected in the county to all counties for the preceeding year. Eighty percent of the money allocated to the counties is given to the State Road Department for road projects within the counties and 20 percent goes directly to the governing bodies of the counties.

STATE LEGISLATIVE ACTS

The Acts of the Florida State Legislature are the means through which the provisions of the Florida Constitution are translated into law. The various laws concerning transportation, and the agencies which administer these laws, are a direct reflection on this basic document.

This section enumerates and summarizes acts of the Florida Legislature which pertain to transportation. It is important to realize that until this year, the Legislature met only once every two years. However, beginning in 1970, the Legislature will meet every year, pursuant to Article III, Section 3, of the new State Constitution. The statutes included in this section are the results of the 1965 and 1967 meetings of the Legislature. The next meeting of the Legislature will begin in April 1969.

1965 LEGISLATIVE ACTS

Chapter 160 - Regional Planning Councils

The purpose of this legislation is to permit two or more contiguous municipalities or counties to establish a council of governments for the purpose of regional planning and implementation. Under the provisions of this legislation, these councils can apply for and use Federal grants for, among other things, highway construction and planning. However, the legislation states that these councils must perform specific services for those local governments electing to form such a governmental council.

Chapter 165 - Municipal Zoning

This statute gives all the municipalities in Florida the authority to regulate zoning and related matters within their individual jurisdictions. This statute in effect prohibits the Dade County government from exercising zoning authority over the 27 municipalities in the county. However, Dade County retains jurisdiction over zoning and other matters in the unincorporated areas of the county.

Chapter 181 - Municipal Revenue Bond Financing

Under the terms of this act, any municipality or county

is empowered to refinance any enterprise within its jurisdiction. This makes it possible for Dade County to bond itself to raise money for any desirable project.

Chapter 288 - Florida Development Commission

The Florida Development Commission has two basic purposes. First, it assists, advises and cooperates with municipal, county and metropolitan areas or other local planning agencies in the preparation of plans and programs for physical and economic development of their areas. Secondly, the Development Commission acts as the official agency of the state to work with Federal agencies in those matters which the Legislature has not delegated to another board, department, bureau or agency in relation to planning or development at state, regional or local levels.

Chapter 332 - Airports

Under this provision, Dade County may acquire land by purchase, gift, devise, lease or condemnation for more airport space. The law also permits the county to accept Federal money for this purpose and for the construction, enlargement or improvement of existing facilities.

Chapter 335 - Florida Highway Code

Under this legislation, all public roads are declared to be State roads. They are divided into four categories: (1) the State highway system; (2) the State park road system; (3) the county road system; and (4) the city street system. The legislation authorizes the State Road Board to provide suitable roads leading to any lands within the state park system.

Chapter 336 - Florida Highway Code

This legislation permits the Board of County Commissioners to establish new roads and discontinue or change old roads. This applies to all public roads outside of municipalities not included in the State highway or park road system. The Board of County Commissioners is given the power of eminent domain to acquire land for the establishment of new roads.

Chapter 337 - Florida Highway Code

This legislation permits the Board of County Commissioners to acquire land by eminent domain for use in the State secondary road system within the county.

Chapter 339 - Florida Highway Code

This part of the Florida Highway Code details how various tax revenues are to be spent by state and local agencies in the provision of highways. Included is the allocation of 80 percent of the seventh cent of the gasoline tax to counties for road projects selected by the county and approved by the State Road Department.

Chapter 350 - Public Service Commission

This legislation grants the Public Service Commission the power to establish and abolish shipping points on all railroads and common carriers. Moreover, the Public Service Commission may secure the necessary facilities for the convenient and prompt handling of all freight.

1967 LEGISLATIVE ACTS

Chapter 23.041 - Creation of a Transportation Commission, Transportation Authority, and Department of Transportation

This act establishes a Transportation Commission to review the findings and proposals of the Transportation Department, a Transportation Authority to advise the Commission and the Coordinate the plans of the Public Service Commission, the State Road Department and the Department of Transportation, and a Department of Transportation to prepare state-wide transportation plans.

Chapter 73.091 - Cost of Legal Proceedings

This legislation states that petitioners (condemning authorities, as it pertains to this report) shall pay all reasonable costs of the proceedings in a circuit court, including a reasonable attorney's fee. This means that the cost of court proceedings for right-of-way acquisition is paid by the agency seeking to acquire or condemn the property.

Chapter 215.20 - Contributions to the Cost of General Government

This section provides for a deduction of four percent from certain money and trust funds as enumerated in Chapter 215.22 as their estimated pro rata share of the cost of general government.

Chapter 215.22 - Description of Certain Money Collected and the Enumeration of Certain Trust Funds

This section describes those sources of money from which a deduction of four percent shall be made for the cost of general government, pursuant to Chapter 215.20.

Chapter 235.602 - Disposition of Funds Collected From Motor Vehicle License Taxes

This legislation defines the terms under which funds collected from motor vehicle license taxes may or may not be used to pay the principle or interest on bonds issued for school construction.

Chapter 323 - Auto Transportation Companies

This act establishes the power of the Florida Public Service Commission to regulate, with several exceptions, all private auto transportation companies in the State of Florida, including bus, taxi, and truck companies.

PORT AUTHORITY ACT

The Port Authority was created by an act of the State Legislature to apply only to those counties with a population of 260,000 or more. When first passed in 1945, Dade County was the only county in Florida to which it applied. Since then, however, many other counties in Florida have come under this legislation, as their populations have reached or exceeded 260,000.

This act designates the Board of County Commissioners to act as the Port Authority for administrative purposes and for the term "port authority" to apply whenever the words "county" or "Board of County Commissioners" are used.

The power and duties of the Port Authority include the following:

- (1) To acquire by grant, purchase, gift, devise, condemnation, exchange or in any other manner, all property, real and personal, or any estate or interest therein, upon such terms and conditions as said county shall by resolution fix and determine.
 - a. The said county Port Authority shall not acquire by eminent domain or condemnation proceedings any property or facilities situated outside the limits of such

county without first obtaining the consent by resolution of the Board of County Commissioners of the county wherein such property or facilities are located.

- b. There is hereby granted to such county and the Board of County Commissioners thereof, the specific right, power and authority to construct, maintain and operate elevated toll roads and the approaches thereto, along, over and across any public street within such county.
- (2) To issue revenue bonds, payable solely from revenues, to pay all or part of the cost of acquisition; construction; extension; enlargement, improvement or modernization of any project, and to pledge the revenues to receive the payment of such bonds, but such shall not bear interest to exceed 5 percent per annum.
 - (3) To fix, regulate and collect rates and charges for services and facilities under its control, to establish, limit and control the use of any project.
 - (4) To approve or disapprove the location, establishment, construction and operation of privately owned airports within the county.
 - (5) The County Commissioners are authorized to issue general obligation funds or revenue bonds for the purpose of paying all or a part of the cost of any one or more projects. The bonds of each issue shall bear interest at such rate or rates not exceeding 5 percent per annum and shall mature within 40 years.
 - (6) An ad valorem tax not exceeding $1\frac{1}{2}$ mills may be levied upon all property subject only to the limitations of a general fund as contained in Section 193.32, F.S., 1941; such taxes shall be charged to the general fund, but such revenue may be appropriated by said county for the cost of constructing, operating, expanding and developing any project or projects.

(7) Any project financed under the provisions of this Act and income therefrom, and any bonds issued under the provisions of this Act and the income therefrom shall at all times be free from taxation within the state.

DADE COUNTY HOME RULE CHARTER

Metropolitan Dade County was created by a special Charter in 1957 as a new form of metropolitan with responsibility over all county-wide functions except State courts and public schools. Also exempted from local control were the functions of all State bureaus and commissions such as the Public Service Commission. The functions under county control include the power to provide and/or regulate public facilities, such as fire and police, hospitals, health and welfare, parks, libraries and museums; community development activities, such as urban renewal, building codes and zoning; and transportation facilities, including roads, traffic, and ports.

The Charter also provided that the new metropolitan government have jurisdiction over comprehensive planning, of which transportation planning is a part, for Dade County and the municipalities contained therein. This is being accomplished through the continual preparation and updating of master plans for the welfare, recreational, economic and physical development of the metropolitan area.

Article I of the Home Rule Charter includes the following specific provisions:

- (1) Provide and regulate arterial, toll and other roads, bridges, tunnels, and related facilities; eliminate grade crossings; provide and regulate facilities; and develop and enforce master plans for the control of traffic and parking.
- (2) Provide and operate air, water, rail and bus terminals, port facilities and public transportation systems.
- (3) License and regulate taxis, jitneys, limousines for hire, rental cars and other passenger vehicles for hire operating in the unincorporated areas of the county.
- (4) Prepare and enforce comprehensive plans for the development of the county.
- (5) The Board shall have the power of eminent domain and the right to condemn property for public purposes.

- (6) The Board shall be entitled to levy in the unincorporated areas all taxes authorized to be levied by municipalities and to receive from the state any revenues collected in the unincorporated areas on the same basis as municipalities.
- (7) Set reasonable minimum standards for all governmental units in the county for the performance of any service or function, and in the event these standards are not met, the Board may take over and perform, regulate, or grant franchises to operate any such service. The Board may also take over and operate, or grant franchises to operate any municipal service if:
 - a. in an election called by the Board of County Commissioners within the municipality a majority of those voting vote in favor of turning the service over to the county; or
 - b. the governing body of the municipality requests the county to take over the service by a two-thirds vote of its members, or by a referendum.

DADE COUNTY ORDINANCES

The Dade County ordinances have the same relation to the Home Rule Charter as do the Acts of the Florida Legislature to the State Constitution; that is, they translate the provisions of the Charter into specific action. These ordinances, collectively called the "Dade County Code" establish various department of the Metropolitan government, delineate their functions, and set forth various minimum standards, such as construction codes, zoning and subdivision regulations, etc. As they relate to transportation, the following provisions are found in the Dade County Codes.

CHAPTER II - ADMINISTRATION

This section of the Dade County Code establishes the various Departments of the county government and describes their duties and responsibilities.

Article XII - Public Safety Department

It is the duty of this department to regulate and control traffic within Dade County in accordance with the laws of this state and the ordinances of this county. This department is also responsible for the coordination and planning of civil defense operations.

Article XIII - Traffic and Transportation Department

This department, established in 1960, has the following functions and responsibilities:

- (1) To provide, develop, maintain, improve, implement and enforce a comprehensive master plan for the control, regulation and appropriate movement of traffic for Dade County, including both the incorporated and unincorporated areas.
- (2) The planning, installation, operation and maintenance of all traffic control devices including, but not limited to, traffic signals, signs, markings, and street name signs on all public streets.

- (3) To determine and designate arterial streets, residential streets, parkways, play streets, scenic routes, bus routes, truck routes, alleys, speed zones, stop signs, crosswalks, safety zones, truck and passenger loading zones, taxi and bus zones, pedestrian signals, pavement markings, yield right-of-way signs, and turn restrictions.
- (4) The department will have exclusive jurisdiction in respect to all matters of traffic engineering within the territorial limits of Dade County subject only to the jurisdiction of the State Road Department in respect to state highways.

Article XIV - Public Works Department

This department has the following functions and responsibilities:

- (1) Construct and maintain all arterial and other roads, bridges, tunnels and related facilities in the unincorporated area of the county as well as other arterial and other roads, bridges, tunnels and related facilities situated partially or entirely within the incorporated areas of the county, which are from time to time designated by the Manager as county arterial or other roads, bridges, tunnels or related facilities.
- (2) Develop plans and make recommendations for the establishment, merger and abolishment of special districts within which may be provided streets, sidewalks, street lighting, and other essential facilities.
- (3) Provide, erect and maintain all traffic control devices and signs and street signs throughout the unincorporated area of the county and along the arterial highways.

Article XV - Planning Department

This department is responsible for the preparation of master plans for the orderly growth of the county. By ordinance, these master plans shall include a coordinated plan for traffic circulation and roads.

Article XIX - Metropolitan Transit Authority

This article permits the county to purchase, develop, operate and maintain all equipment and facilities necessary for an adequate mass transit system. This is to be done on a self-liquidating and self-sustaining basis through the establishment of a Transit Authority, which also has the power and responsibility to gather data and information and to make known its findings and recommendations to the Board of County Commissioners relating to all aspects of transit operations in Dade County.

CHAPTER XXVIII - SUBDIVISIONS

The purpose of the subdivision regulations is to guide the development of subdivisions in Dade County in such a manner as to protect the health, welfare and amenity of their residents, and to insure that Dade County's growth is in an orderly fashion. The application of these subdivision regulations is county-wide. The following transportation-related sections are found in the subdivision regulations.

Section 28-1 - Definitions

This section of the subdivision regulations defines various terms used in the ordinance. Included are definitions of "alley," "arterial street," "collector street," etc. More important is the identification of the "Manual of Public Works Construction of the Department of Public Works." This is the manual referred to in the regulations as the standards to which all public works' construction shall conform to be in compliance with the subdivision regulations.

Section 28-2 - Purpose of Chapter

This section specifies that the purpose of the subdivision regulations is to prevent traffic hazards and provide for the safe and convenient movement of vehicles and pedestrians in land developments.

Section 28-3 - Application of Chapter

This section specifies that the provisions of the subdivision regulations shall be enforced in both the incorporated and unincorporated areas of the county.

Section 28-14 - Design Standards

This section states that if a master plan has been adopted for the area to be subdivided, the proposed subdivision shall conform in principle with this master plan. The section goes on to detail how streets, alleys, easements, blocks and lots shall be designed so as to conform to the master plan. Various street and lot dimensions are specified within this section. More detailed requirements are set forth by stating that the provisions of the "Manual of Public Works Construction of the Department of Public Works" be followed.

Section 28-15 - Required Improvements

This section specifies the required improvements to be installed by the subdivider as they apply to design of streets, curbs, sidewalks, street signs, etc.

Section 28-18 - Encroachments On or In Streets

This section prohibits encroachments on streets such as buildings or other structures.

CHAPTER XXX - TRAFFIC AND MOTOR VEHICLES

This chapter of the Dade County Code sets forth the rules and regulations under which the movement of all traffic and motor vehicles is governed in Dade County. It includes a description of all traffic violations and sets various penalties for them. Its application is county-wide, and nullifies or supersedes all previously enacted municipal traffic codes.

Section 30-165 - Enforcement of Chapter

This section places the enforcement of this chapter in the hands of the police officers of Dade County.

Section 30-171 - General Duties of Traffic Director

This section describes the general duties of the traffic director, which include the planning and installation of traffic control devices; the operation of traffic on county streets, including parking; and the investigation of traffic conditions.

CHAPTER XXXIII - ZONING

This chapter contains the zoning ordinance of Dade County. The major purpose of this chapter is to govern the relationships of land uses in the unincorporated areas of Dade County to prevent incompatible adjoining uses which would be detrimental to the residents of the area. Unlike the subdivision regulations, whose enforcement is county-wide, the zoning ordinance is applicable only in the unincorporated sections of the county.

Section 33-56 - Compliance with CAA Rules

All buildings, structures and improvements to be constructed shall conform and comply with the prevailing criteria and requirements of the Civil Aeronautics Administration, where applicable. The Director of the Building and Zoning Department shall process all such applications for building permits through the Port Authority and the Civil Aeronautics Administration whenever he deems it applicable.

Section 33-133 - Right-of-Way and Minimum Widths

This section of the zoning ordinance prescribes the minimum right-of-way widths for all public streets and roads in the unincorporated areas of the county. The streets and roads are listed and minimum right-of-way widths are given.

Section 33-155 - Permit Renewal for Public Benches

The Director of the Building and Zoning Department has the authority to refuse to renew permits for public benches if the continued maintenance of the bench will obstruct traffic or create a hazard to public safety.

Section 33-157 - Location of Bus Benches

The Director of the Building and Zoning Department has the right to refuse approval of any location for bus benches when it appears that a traffic hazard may result. He also has the authority to remove existing bus benches under the same conditions.

FEDERAL PROGRAMS AND LEGISLATION

The Federal Government has many programs covering various aspects of transportation. No attempt will be made in this report to cover all such programs. Only the most important programs will be discussed.

FEDERAL AID HIGHWAY ACT OF 1916, AS AMENDED, 1958

This program provides financial assistance to State Highway Departments for the construction of the Interstate Highway System and for building or improving primary and secondary roads and streets. Funds are apportioned to the states on a 90 per cent Federal and 10 per cent state basis for the Interstate System, and a 50 per cent Federal and 50 per cent state basis for other projects. Part of the Federal aid funds (1½ per cent) are allocated for planning and research and are used in urban areas to make urban area studies and to develop highway programs.

Federal assistance is available on an emergency basis to State Highway Departments for the reconstruction of roads and bridges on Federal-aid highway systems which are damaged by natural disasters which are beyond the States' ability to raise the money for repairs.

This Act also declares that it is in the national interest to encourage and promote the development of transportation systems embracing various modes of transit. The Secretary of the Department of Transportation is directed to cooperate with the States in the development of long-range highway plans and programs which are coordinated with plans for the improvements in other forms of transportation.

FEDERAL AID HIGHWAY ACT OF 1962

In 1962, Congress added an important requirement to the conditions under which Federal aid would be granted for the construction of highways. This legislation required all state highway departments to work jointly with large urban areas for the purpose of preparing long-range plans for transportation facilities, including highways, needed for these areas over a 20-year period,

including a schedule of priorities and means of financing. Since July 1, 1965, the Secretary of the Department of Transportation has not approved any new Federal aid road projects in standard metropolitan statistical areas of more than 50,000 population unless such projects were based on a continuing, comprehensive transportation planning process carried on in cooperation by states and local governments.

Three-fourths of the cost of preparing such plans are supplied by the Federal government. The actual cost of the facilities is also paid for in part with Federal money. Ninety per cent of the cost of Interstate roads is paid for by the Federal government, and 50 per cent of the cost of primary and secondary roads is met by the same means, depending on the amount of Federal land available for right-of-way.

This legislation has had the effect of promoting comprehensive transportation planning in large urban areas seeking Federal assistance in highway construction. It has also spurred planning efforts in other areas such as public facilities, parks and recreation, etc.

HIGH-SPEED GROUND TRANSPORTATION STUDY ACT

This program provides for contracts for research and demonstration projects in high-speed ground transportation to promote the development of a safe, adequate, economical and efficient national transportation system. Research programs cover components, aerodynamics, propulsion, control, communications, guideways, and other areas. Demonstration projects should contribute to the development of better inter-city transportation, and should measure and evaluate public response to new equipment, higher speed, variations in fares, comfort and convenience, and more frequent service.

Contracts under this program, which terminate June 30, 1969, may be awarded to public or private agencies, institutions, organizations, corporations or individuals.

HIGHWAY BEAUTIFICATION ACT OF 1965

This program provides for a revision of existing legislation covering Federal-aid highways for the purpose of beautifying highways and communities by controlling outdoor advertising signs,

billboards, displays, controlling the establishment, use and maintenance of junkyards in areas adjacent to highways, and landscaping and otherwise beautifying the scenery along such highways.

Compensation will be paid by the Federal government for properties or rights to property affected by this program, or for the costs of landscaping and scenic improvement. The Federal share in most cases is 75 per cent of the cost.

GEODETIC CONTROL SURVEYS AND TIDELAND STUDIES

The purpose of this program is to provide charts and related information for the safe navigation of marine and air commerce, and to provide basic data for engineering and scientific purposes and for other commercial and industrial needs.

This program also assists states, counties and municipalities in the establishment of geodetic control to be used as a basis for highway construction, bridge construction, water supply surveys, and urban development and renewal surveys. Projects are usually undertaken on a cost-sharing basis with states, counties and municipalities eligible to negotiate such projects.

URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED

The purpose of this Act is to assist states and local governments in the planning, development and financing of improved mass transportation systems. Federal funds may be used for the acquisition, construction, reconstruction and improvement of facilities and equipment for use in mass transportation service in urban areas. The program encourages research, development and demonstration of new techniques in all phases of mass transportation. Grants cannot exceed two-thirds of the cost of such projects, and can be made only to state and local governments or their agencies. However, the facilities or equipment acquired or improved with Federal funds may be loaned to or operated by private organizations which may participate in demonstration projects through contractual arrangements.

URBAN PLANNING ASSISTANCE PROGRAM

This program provides Federal funds to assist comprehensive urban development planning programs in small communities, states and metropolitan areas. Eligible activities include preparation of comprehensive development plans, capital improvement programs, coordination of development planning, coordination of inter-governmental urban planning activities, and preparation of regulatory and administrative measures such as general plans and zoning ordinances. Grants may be made to cover the cost of studies and research to develop and improve planning methods.

AIRPORT DEVELOPMENT PROGRAM

Federal grants are available for projects that are essential to the operation and safety of airports. They can be used for land acquisition, site preparation, construction, modification and repair of runways, taxiways and airport roads, and the construction and installation of lighting and utilities. The Federal government usually provides one-half the cost of such projects.

HOUSING AND URBAN DEVELOPMENT ACT OF 1965

This program assists local public bodies or agencies in the acquisition of land in a planned and orderly fashion for the future construction of public works and facilities. The agency must be a local public body or board, or commission established by state law to finance water and sewer improvement projects.

NATIONAL TRAFFIC AND MOTOR VEHICLE SAFETY ACT OF 1966

This Act establishes safety standards for new motor vehicles and tires.

HIGHWAY SAFETY ACT OF 1966

This Act provides that each state must have a highway safety program which shall include the uniform safety standards set forth by the Department of Commerce. The state program must provide

that the Governor is responsible for the administration of the program, and that he must authorize the state's political subdivisions to carry out their own safety programs, including a comprehensive driver-training program.

CONTROL OF OUTDOOR ADVERTISING

This Act controls the erection and maintenance of outdoor advertising in areas adjacent to the Interstate Highway System and the primary system to protect the public investment in such highways by promoting safety and recreational values and the preservation of natural beauty.

The provisions of this Act are carried out through a reduction of ten per cent of Federal funds allocated to the State Road Departments for highway purposes if the Secretary of Transportation determines that the state has not made proper provisions for the effective control of advertising within 600 feet of the highway right-of-way. This means that after January 1, 1968, signs, displays and devices within 600 feet of the highway right-of-way shall be limited to directional and official signs, advertisements for the sale or lease of property upon which they are located, and advertisements for activities conducted on the property where the sign is located.

LANDSCAPING AND SCENIC ENHANCEMENT

The cost of landscaping and roadside development, including the acquisition and development of publicly owned and controlled rest and recreation areas, is shared by the Federal Government under this program. An amount equivalent to three per cent of the funds appropriated to a state for Federal Aid Highways is allocated to that state for such purposes.

DEMONSTRATION CITIES AND METROPOLITAN DEVELOPMENT ACT OF 1966 (since re-named the Model Cities Act)

The most important provision of this Act affecting transportation deals with airports. The Department of Housing and Urban Development is authorized to conduct a study to determine feasible methods of reducing the economic hardship suffered as a result of the

depreciation of property values following the construction of airports in the vicinity of their homes. This study also includes investigation of various means of insulating homes against aircraft noise.

In addition, Section 204 establishes a metropolitan review procedure for all plans utilizing Federal loans or grants, including planning and construction of highways and transportation facilities. Applications for Federally assisted projects must be submitted to a designated areawide agency for review and evaluation of consistency with comprehensive metropolitan planning.

CONCLUSIONS AND RECOMMENDATIONS

The laws and ordinances enumerated and summarized in this report form the legal framework within which the recommendations of the other MUATS reports may be implemented. Without an adequate framework of laws, the implementation of these plans would be very difficult, if not impossible. The recommendations of this particular report are a direct outgrowth of the entire MUATS study; that is, the actions called for in this report are necessary if the implementation of the other MUATS proposals is to become possible. A comprehensive evaluation of these laws and ordinances leads to the conclusion that there is need for additional legislation, or amendments to existing legislation, at the State, local and Federal level.

STATE LEGISLATION

The greatest need for legislative changes is at the State level. These needed changes generally fall into two major categories; first, the need to modify the internal operations of State agencies and departments responsible for transportation, and second, the need to remove many legal impediments which make it difficult for local jurisdictions to plan and provide for balanced transportation systems.

Reorganization of State Agencies

The reorganizing of those State agencies responsible for transportation will make them more responsive to local conditions and needs. This process has already begun; the new State Constitution adopted last November limits the number of State Departments to 25, compared with the 150-plus now existing. Each State Department will be examined in terms of its functions with the idea of combining as many similar functions as possible. In this process, existing agencies will take on new functions, and new agencies, combining the functions of several existing agencies, will be created.

Many of Florida's transportation problems can be alleviated, if not solved, by combining the transportation functions of the numerous departments and other agencies under one agency. At present, there are various State authorities and commissions dealing with common carriers, turnpikes, primary and secondary road systems, railroads, etc. This division of responsibility makes the creation of integrated plans difficult, and often leads to expensive and

unnecessary duplication of transportation facilities.

Steps have been taken to coordinate transportation planning efforts at the State level. In 1967, the Florida Legislature created a Transportation Commission, a Transportation Authority, and a Department of Transportation. The Transportation Commission, consisting of the Governor and several cabinet officers, including the Director of the Transportation Department, reviews and approves the findings and plans of the Transportation Department. The Transportation Authority is made up of the Chairman of the Florida Public Service Commission, the Director of the Department of Transportation, and the Chairman of the State Road Board. The duties of this Authority are to advise the Transportation Commission, and more importantly, to coordinate the functions and plans of the Florida Public Service Commission, the State Road Department and the Department of Transportation. The Department of Transportation, located in the executive branch of the State Government, is responsible for the preparation of a comprehensive, state-wide transportation plan. This legislation, therefore, has made a valuable start in coordinating the transportation planning functions held by several separate agencies.

It is recommended to state officials that this process of coordinating the activities of various transportation agencies be continued. Specifically, the responsibility for planning, the highway programs of the entire state, should logically be placed under the new Department of Transportation. This Department should be funded and staffed as is necessary to carry out its important job of state-wide transportation planning by working in parallel with similar departments at the local level, such as the Dade County Department of Transportation. Only when local areas, such as Dade County, have a single transportation agency at the State level with which to deal, can comprehensive and balanced plans related to local needs and conditions, such as MUATS, become a reality.

Removal of Impediments to Local Transportation Planning

In addition to governmental reorganization at the State level, many impediments to local planning and funding of transportation facilities need to be removed by State legislative action. Much of the State's regulation of local transportation activities is a hold-over from the days when only the State government had the manpower, talent and funds necessary to provide local transportation facilities. However, as Florida has grown, this situation has changed, and many local areas, particularly Dade County, now have competent transportation agencies of their own. Although Dade County's Home Rule Charter gives it considerable latitude in transportation planning, the Charter specifically states that the powers of various State regulatory agencies shall not be diminished. For example, the Florida Public Service Commission regulates all private

auto transportation companies in Dade County. All fares, rates, routes and schedules for busses, trucks, taxis, railroads, etc., are subject to review and approval by the Public Service Commission, after appropriate public hearings. This makes the adjustment or coordination of the various components of Dade County's transportation system very difficult at times.

It is recommended that the authority of the Florida Public Service Commission be modified by specifying that a county having a properly constituted local transportation agency be granted unrestricted jurisdiction over the administration of all phases of its local transportation system. It would permit the integration of all common carriers into a comprehensive, county-wide transportation system. Thus, the responsibility for local transportation administration would be placed with local agencies which are more sensitive and responsive to local needs and conditions than outside agencies.

It is further recommended that as an interim measure, the process of evaluating local needs at public hearings held by the Public Service Commission be reviewed. This will ensure that actions taken by the Commission, as in the granting of permits to operate new bus lines or trucking companies, are approved only after the consequences of such actions have been carefully considered. The Public Service Commission should give greater weight to the recommendations of local elected officials and transportation administrators.

Many public facilities, especially transportation facilities, are best provided on an area-wide or regional basis. This is possible only through regional transportation planning. Under existing legislation, regional planning councils consisting of appointees from contiguous counties may engage in regional planning. Two such councils have been formed in Florida; the Tampa Bay Regional Planning Council, and the East Central Florida Planning Council. Although these councils have produced many excellent results, the fact that they are composed of appointed members and not the elected officials of participating jurisdictions limits their ability to engage in meaningful governmental and urban planning and implementation. Therefore, it is recommended that legislation be passed at the state level permitting the elected representatives from two or more contiguous counties to engage in regional planning and implementation. This would include the power to levy taxes or issue bonds, the proceeds from which would be used to meet, either wholly or in participation with State or Federal funds, the costs of local transportation needs.

An example of an area where regional planning and implementation would be beneficial is the southeastern coast of Florida, encompassing Dade, Broward and Palm Beach Counties. Regional plan-

ning in all areas, including transportation, is necessary for the continued and coordinated growth of this part of Florida. Efforts should be made at both the State and local level towards the creation of a multi-county planning agency which could create and implement plans for the development of this area.

Another impediment to regional planning is the stipulation found in Chapter 160, Florida Statutes (1965), which says that all services rendered by such agencies must be directly chargeable to the individual jurisdictions participating in these agencies. This has the effect of making comprehensive, long-range planning impossible by not permitting participating jurisdictions to make lump-sum payments to these regional planning agencies. It is recommended, therefore, that Chapter 160, Florida Statutes, be amended to permit participating jurisdictions to make lump-sum payments, according to an agreed-on formula, to councils of government, removing the stipulation of direct accountability for all services performed by these agencies. This would then make possible the long-range comprehensive planning of, among other things, regional transportation facilities, such as inter-county rapid transit systems.

Re-Allocation of State Funds

Under existing legislation, State agencies control most of the funds that are used to construct and maintain transportation facilities in local areas. These funds come mostly from gasoline taxes. Of the 11 cents tax on each gallon of gasoline, four cents automatically goes to the Federal government for the construction and maintenance of the Interstate Highway system. Six of the remaining seven cents are directly controlled by the State government through the State Road Department. The only money directly controlled by counties is 20 percent of the seventh cent of gasoline taxes collected within that county. The remaining 80 percent of the seventh cent of gasoline tax is programmed cooperatively by the counties and the State Road Department. Again, this practice is a hold-over from the time when State agencies were the only bodies capable of planning transportation systems anywhere in Florida. It was only natural for the State to control the source of funds. However, as previously indicated, this situation has changed, and many counties, including Dade, now possess competent transportation planning agencies of their own. If counties are to have more control over the planning and running of their transportation systems, it is only logical that more money be made available to them for these functions. Therefore, it is recommended that those counties who elect to do so should be able to retain 80 percent of the fifth, sixth and seventh cents of gasoline taxes collected within their respective counties. This would entail both constitutional and statutory changes. The fifth and sixth cents are distributed

according to a formula detailed in the new Florida Constitution; the seventh cent's distribution is set forth in Chapter 339.08 (1967), Florida Statutes.

Under Florida law, each agency must contribute a certain sum of money to the general cost of State government. The State Road Department's share comes to approximately \$4.3 million per year. This money is badly needed for local road projects throughout the state. It is therefore recommended that section 208.04, Florida Statutes be amended to reduce the State Road Department's mandatory contribution from \$4.3 million to \$225,000 per year, making over \$4 million in additional funds available for road programs in local areas.

Changes in Right-of-Way Acquisition Procedures

Right-of-way acquisition is one of the most difficult problems associated with the planning and provision of transportation facilities. There are many state laws which have the effect of hindering the implementation of local transportation plans by making it difficult for local authorities to acquire right-of-way at reasonable cost.

It is recommended that section 320.20, Florida Statutes, be amended to make more money available to local areas for right-of-way purchase. This amendment would stipulate that after the requirements for county capital outlays and debt service of the school trust fund are met, all other proceeds from the sale of motor vehicle licenses would go to the state roads trust fund for the purchase of primary road right-of-way.

Another serious problem involves the amount of land actually required for these rights-of-way. The State Road Department is prohibited by State law from purchasing more land than is actually needed for the right-of-way. This means that very often, half lots must be purchased for the right-of-way. This has the effect of denying the owner of the lot the use of his property, even though only half of it is taken for the right-of-way. In cases such as this, the State Road Department often must pay for the entire lot because of the effect the expressway or highway has on the entire lot and not just that part which is actually used. However, the State Road Department cannot retain title to that part of the lot it does not use, even though it has paid for it. This has the undesirable effect of leaving many small parcels of undeveloped and unusable land adjacent to highway and expressway rights-of-way.

It is recommended that the State Road Department and the cities or counties work together to correct this situation. The jurisdiction within which the half-parcel of land not used for

right-of-way should be responsible for its purchase. This lot, or many combined lots, could then be resold to private interests for uses compatible with highways or expressway right-of-way. Such uses, depending on individual circumstances, might be of an industrial or commercial nature. This land could also be used for parks or open space. In any case, the land would be returned to the tax rolls, instead of going to waste as it often does under present legislative conditions.

Highway and expressway rights-of-way very often have disruptive effects on adjacent neighborhoods. Families are forced to leave, and neighborhoods are split and fragmented unless these transportation facilities are properly planned. There are numerous cases where highway and expressway rights-of-way are the starting point of a stable neighborhood's decline or an accelerating factor in a deteriorating neighborhood's further decline. Highways and expressways should be planned so they will become an integral part of a neighborhood. There are tremendous opportunities for the comprehensive redevelopment of neighborhoods through which highways and expressways must pass, as well as the potential for accelerating deterioration.

A comprehensive and interdisciplinary approach to the problem of right-of-way planning is needed to accentuate the positive aspects of these facilities. It is recommended that all local, State and Federal agencies involved in planning for urban environments be encouraged to work together, using an urban-design team approach, to plan for the integration of highways and expressways into the neighborhoods through which they pass. If such an area is in a state of decline, as is often the case, the entire area should be the subject of intensive planning and redevelopment efforts, not just the area needed for right-of-way. In this way, the provision of highways and expressways can become a positive force for renewal and neighborhood stabilization. It is also recommended that citizen participation in the planning process for such projects be increased, giving local residents more direct involvement in the process of formulating plans for their neighborhoods.

The problems of right-of-way acquisition in Florida are often complicated by State legislation which has the effect of making such acquisitions more costly. Under present procedures, this is a long and tedious process, taking up to two years in Dade County. During this time, there is nothing to prevent land from increasing in value. This often results in a disproportionate share of limited funds being spent on right-of-way acquisition at the expense of planning, construction and maintenance.

Present State legislation encourages property owners to seek excessive awards for their property in a variety of ways. One is the length of time required by court proceedings to acquire property. During these proceedings, the price of land can go up through speculative selling or through the construction of improvements on the land which forces the expenditure of more money to purchase improved property. Possible remedies might be found in Ohio and New York legislation. Ohio law now requires that legal proceedings begin within 20 days after a property owner indicates his intention to go to court to seek more money for his land. New York law states that after the plans for a highway have been properly filed, that all existing and proposed improvements to the right-of-way required by stopped. This prevents the price of the right-of-way from escalating due to improvement. Every effort should be made to secure similar legislative acts from the Florida State Legislature.

Another factor that increases right-of-way costs is the payment of attorneys' fees in acquisition cases. Florida is the only State in the nation that specifies that the condemning authority pay the attorney's fee in such cases. It has been estimated by the Right-of-Way Division of the Dade County Public Works Department that about ninety percent of the right-of-way needed to construct highways and expressways in Dade County is acquired without court proceedings. It is the remaining ten percent that choose to seek excessive payments that increases the cost of acquiring right-of-way. Under present law, the property owner has nothing to lose, even if he is not granted more money for his property, because the condemning authority must pick up all attorney fees and other court costs. Proposed legislation, which would amend section 73.091, Florida Statutes, would define what constitutes a reasonable attorney fee in acquisition proceedings. Under this bill, the attorney fee would be based on the amount of gain a property owner makes as a result of court proceedings. What this means is that if the property owner does not receive money in excess of the original estimate, the attorney gets nothing. This would have the desirable effect of making many property owners and lawyers carefully consider the consequences before going to court in an effort to seek excessive awards.

LOCAL CHARTERS, CODES AND ORDINANCES

Dade County Home Rule Charter

The Dade County Home Rule Charter, under Section 1.01, grants the County government the power to assume various municipal functions when the level of service does not meet the minimum standards set by the county. At present, this power does not extend to those municipal operated or franchised transportation

companies which come under State regulation. This means that any city wishing to do so can apply to the Florida Public Service Commission for permission to operate, license, or grant a franchise to a private bus or truck company. As previously explained, the public hearing procedures of the Public Service Commission need to be re-evaluated so that the testimony of local elected officials and administrators will have greater "weight" in Commission decisions affecting local areas.

Also at the local level, the authority of the County government needs to be extended into the area of transportation so that the comprehensive and balanced system recommended by MUATS can be implemented. Specifically, it is recommended that ordinances be passed granting the Board of County Commissioners greater control over the municipal regulation of transportation facilities.

Metropolitan Transit Authority

Under Article XIX, section 2-146 of the Dade County Code, the Metropolitan Transit Authority must operate on a self-liquidating and self-sustaining basis. This means that the MTA system as a whole must operate solely from fare-box revenues. It is not eligible for subsidies from general tax revenues.

It Dade County is to have an improved public transit system incorporating rapid transit, as proposed by MUATS, the self-sustaining provisions of this article will have to be removed to permit MTA to receive subsidies. This is particularly important to the success of the proposed rapid transit network, as these facilities often show a loss during their first years of operation. Therefore, it is recommended that article XIX of the Dade County code be amended to eliminate the self-sustaining and self-liquidating provisions.

Under the present organization of the Dade County government, the responsibility for transportation operations is divided between various departments and authorities. This is not illogical, as different talents and organizations are necessary to fulfill different requirements. For example, the day-to-day operation of a public transit system, requires a different organizational structure than the systems called for in maintaining local streets and traffic control. However, because the decisions and operations of either of these operations directly affects the other, the closest cooperation possible between these and other agencies responsible for Dade County's transportation systems should be maintained and improved. It may even be possible and desirable to merge the functions of these agencies into a single agency, organized in such a way as to take into account the many diverse functions that would be brought under the same roof. This concept should be the subject of

continual discussion among all agencies responsible for the planning and administration of all elements of Dade County's transportation system.

Zoning and Subdivision Regulations

Much work needs to be done on Dade County's zoning and subdivision ordinances if they are to be more effective as tools for the planning and regulation of transportation activities. The upgrading and revision of these ordinances is constantly in progress. For example, the proposed revision of Dade County's subdivision regulations contain sections dealing more closely with the relationship of right-of-way to adjacent land use.

However, there is just so much that can be done in modifying zoning and subdivision ordinances by "conditioning" them; that is, by specifying the "conditions" under which an area will be zoned a certain way or by specifying the "conditions" under which subdivision plats will be approved. Too many such "conditions" can have the effect of causing legal questioning of certain "conditional" sections of these codes and ordinances.

At present, there exists a two-sided problem with Dade County's zoning and subdivision ordinances as they relate to transportation; first, to preserve the integrity of these ordinances by removing these "conditions" that could inhibit their proper enforcement, and second, to maintain the type of control stipulated in these "conditions" contained in the ordinances. One solution to this dilemma would be the creation of a separate Land Development Ordinance. This ordinance would concentrate on presenting standards related to "how" development is permitted to occur throughout Dade County by specifying standards for such development. Examples of work done along these lines are found in the "Landscape Manual for Off-Street Parking and Other Vehicular Use Areas," and an amendment to Section 28-15, Dade County Code, requiring that all utility lines in new subdivisions be placed underground. The "Landscape Manual..." states that the purpose of the manual is "...to assist in the preparation of landscape plans by providing illustrative interpretations of some key sections of the ordinance." This ordinance sets forth minimum standards for the landscaping of off-street parking areas. Its application is county-wide. Chapter 28-15 of the Dade County has been amended to require that all utility cables be placed underground in new subdivisions. This is part of a comprehensive program aimed at eventually placing all of Dade County's utility lines underground.

These are two examples of the type of ordinances or "conditions" now found in zoning and subdivision regulations that

could be included in this Land Development Ordinance. As this ordinance relates to transportation planning, it could contain sections detailing specific standards for the construction of expressways and major arterials to make them more compatible with adjacent land uses. For example, regulations relating to the placing and construction of elevated structures could be included that would enhance instead of degrade adjoining land uses, as is so often the case at present. The relationship between major arterials and adjoining land uses could be improved through the provisions of this ordinance by eliminating many of the dangers associated with entrance and exit to strip commercial developments.

The creation and passage of such an ordinance would have two immediate effects; first, it would set forth in a single document mandatory standards for the placement and construction of transportation facilities to make them more compatible with adjoining land uses, and second, it would free existing zoning and subdivision ordinances from the many "conditions" related to development that presently endanger many sections from being adequately enforced. The preparation of this Land Development Ordinance merits immediate attention.

Transportation Corridors Map Act

Dade County's "home rule" status presents many opportunities for local control of transportation planning. However, one area that is presently unclear is local ability to acquire or designate right-of-way for expressways or major arterials in advance of actual need. There is presently no Official Map Act enabling legislation at the State level. This means that local governments do not have the power to designate right-of-way for highways in advance of actual need to keep down the costs of such purchases. It is not clear if Dade County, with its home rule Charter, has the power to enact its own Official Map act to permit advance designation of right-of-way. This matter should be cleared up immediately.

If it is decided that Dade County may enact such a Map Act, it should not be limited to the designation of right-of-way for only highways. What is needed is a "Transportation Corridors Map Act" to permit the designation of needed right-of-way for all types of transportation facilities. This is particularly important for future planning of rapid transit facilities in Dade County, which will require substantial amounts of land for track, station and terminal locations. The ability to designate the needed right-of-way for such facilities in advance of actual need is important if costs are to be kept down. It is estimated that right-of-way acquisition is about 40 to 50 percent of the total cost of all transportation facilities in urban areas. If this percentage can be reduced through

advance designation and purchase, more money might be available for other areas of transportation.

Zoned Rights-of-Way

Both the Dade County subdivision regulations and zoning ordinance have provisions which, when used, set aside street right-of-way. The entire county is divided into sections, quarter and half sections and five-acre sections. These lines are plotted on a map in a grid system.

Section 28-18 of the subdivision regulations, which are county-wide in effect, states that no structure, except underground utilities, shall be permitted in or on a "mapped street." The five-acre fractional lines throughout the county are defined as the centerlines of these "mapped streets." This means that this right-of-way, as defined by the five-acre fractional line, may, at the discretion of the director of the building and zoning department and the director of public works, be used taken for interior subdivision streets. This may be done whether the street exists or not.

There are similar provisions in the zoning ordinance, which is in effect only in the unincorporated areas of the county. Chapter 33-133 specifies that the section lines of the county shall constitute the centerline of an 80 foot right-of-way. The half and quarter section lines shall be the centerline of a 70 foot right-of-way. As in the subdivision regulations, the five acre fractional lines are the centerlines of interior subdivision streets with a width of 50 feet.

These designated street right-of-way widths are insufficient for the needs of modern transportation facilities. It is recommended that the widths for section and half-section lines be increased from 80 feet to at least 100 feet and preferably 120 feet. The quarter-section and five-acre line widths of 70 feet and 50 feet respectively are sufficient and should not be changed.

Where it is decided to exercise these options, various trade-offs are possible between regulatory agencies and developers. For example, if a developer does not wish to provide a street right-of-way where one is called for by the presence of a five acre fractional line, an arrangement can be made whereby another right-of-way is dedicated to serve a similar function, thus freeing the developer to use the land as he wishes while at the same time meeting the requirements for traffic circulation specified by the regulations.

As the provision of transportation facilities in Dade

County becomes more complex and expensive, every available tool should be carefully evaluated and the best ones put to maximum use. The requirement for preservation of right-of-way along certain lines throughout the county has the potential of helping to assure the existence of street and highway rights-of-way in advance of when they are actually needed. This will not only expedite the planning of transportation facilities, but could mean the savings of large sums of money otherwise spent on acquiring right-of-way that has been developed. The provisions of these regulations and ordinances should be used whenever it is felt that transportation rights-of-way are needed to serve a developing area. The waiving of these requirements should be given careful scrutiny before being granted, as the lack of adequate right-of-way for transportation facilities can be a detriment to the successful development of new areas in Dade County.

FEDERAL PROGRAMS

If the recommendations contained in MUATS are to be implemented, substantial Federal funds will be needed. At this point, the future of Federal funding for major expressway construction is uncertain, as the Interstate Highway System is scheduled to be completed in 1975. Whether or not the 4 cents tax on every gallon of gasoline sold will be retained and to what use it will be put is not certain.

Continued Funding

As a general recommendation, this tax should be retained and spent on local highways other than Interstate Highways. However, as has been pointed out other MUATS reports, highways alone will not solve the transportation problems of urban areas. A balanced system of both highways and rapid transit is needed. Within Dade County, a 67 mile system of rapid transit and rapid busways has been recommended at a cost of between \$403,000 and \$780,500. Due to the magnitude of these costs, it is doubtful that this amount of money could be raised from local or even State sources. Therefore, the construction of a rapid transit system in Dade County depends largely on the availability of Federal funds.

At present, there exists no Federal program for the construction of rapid transit facilities in local areas. It is therefore recommended that every effort be made at the State and local level to secure this legislation at the Federal level.

Federal highway programs are unique in that the funds go directly to the respective State governments, who in turn work with local areas for the planning and development of highway

facilities. This differs from other Federal grant-in-aid programs, particularly those dealing with urban problems, in that these funds usually go directly to the cities.

However, even under this arrangement, there are numerous guidelines and restrictions accompanying the funds going to States and their agencies. These guidelines need to be the subject of constant review and updating so that they will not impede the provision of funds to be used for highway construction in local areas. It is recommended that local, State and Federal officials continuously review these guidelines with the idea of making them relevant to changing conditions. In this way, the changing concepts and demands being placed on transportation facilities can be met with realistic and flexible funding guidelines that will aid, and not impede, the planning and provision of balanced transportation systems.

Changes in Federal Grant-in-Aid Procedures

The 1962 Highway Act requires detailed transportation planning before the release of Federal funds for highway construction. While this has had a highly desirable effect of promoting planning of all types in local areas, it has also increased the difficulties of right-of-way acquisition. The Florida State Road Department has often been reluctant to approve advance acquisition of right-of-way without the detailed planning required for Federal funds. Only after the formulation and publication of these plans, as per Federal requirements with subsequent assurance of Federal participation in funding, has the State Road Department approved the initiation of right-of-way acquisition. This time-lag permits the price of land needed for right-of-way to increase tremendously. In many cases, the funds gained through Federal participation have been wiped out by the increase in land prices. This factor should be taken into account when planning for highways. If it is decided that the gains of Federal participation would be eliminated through increased land prices, then the State Road Department should seriously consider the possibility of proceeding on its own in the advance acquisition of right-of-way before the detailed planning is done as required by the Federal government.

APPENDIX A

LIST OF BACKGROUND REPORTS

The following is a list of background reports to be published as part of the Miami Urban Area Transportation Study:

Study Design for Miami Urban Area Transportation Study
Economic, Population & Land Use Projections
Community Attitudes for Transportation Planning
Laws and Ordinances
Goals for Transportation
Implementation of the Plan
Continuing Program for Transportation Planning
Commercial Model Development
Transit Cost Allocation Model Development
Present Transit Service
Corridors for Transit Improvement
Route, System, Design and Cost Estimates
Forms of Mass Transportation
Evaluation of Alternate Transit Plans
Street and Highway Master Plan
Transit Master Plan
Airport Master Plan
Terminal Facilities Master Plan
Seaports and Waterways Master Plan

APPENDIX B

SUMMARY OF TRANSPORTATION RELATED LEGISLATION
PASSED AT 1969 SESSION OF FLORIDA LEGISLATURE
(As of June 18)

The following transportation planning related laws have either been enacted into law or are awaiting action by the governor. Where applicable, reference is made to proposals contained in this report by page number.

NEW LAWS

<u>Designation</u>	<u>Subject</u>	<u>Description</u>
Chapter 69-33 (House Bill 505)	Municipal Home Rule	Grants governmental, corporate and proprietary powers to municipalities to enable them to conduct municipal government, perform municipal functions and render municipal services and exercise any power for municipal purposes in accordance with Article VIII, Section 2(b) of the Constitution. (p. 25)
Chapter 69-69 (House Bill 188)	Voluntary Intergovernmental Councils	Authorizes the establishment of voluntary councils of local public officials with the power to study area governmental problems. (p. 25)
Chapter 69-63 (House Bill 281)	Regional Planning Councils	Authorizes counties and municipalities to make contributions, in lump sums or otherwise, from public funds to regional planning agencies. (p. 26)
Chapter 69-42 (Senate Bill 32)	"Florida Inter- local Cooperation Act of 1969"	Authorizes all public agencies of the state to enter into agreements with each other, other states, and the United States.
Chapter 69-305	Redevelopment Act	Permits local areas to engage in federally-funded urban renewal activities.

AWAITING ACTION BY THE GOVERNOR

<u>Designation</u>	<u>Subject</u>	<u>Description</u>
Senate Bill 584	County Home Rule	Grants counties all powers of local self-government, including governmental, corporate and proprietary powers to enable them to conduct county government, perform county functions and render county services, and to exercise any such powers for county purposes. These powers are to be exercised by the boards of county commissioners by the enactment of ordinances pursuant to law. (effective immediately
Senate Bill 4	Municipal Planning	Empowers local governing authorities, individually or jointly, to plan for future development and to adopt and implement, by zoning codes and subdivision regulations, comprehensive plans for future development. Provides for planning commissions and for the legal status of a plan and procedures and requirements for its adoption, review and revision. Further provides that "that this act is to be liberally construed to accomplish its purpose." (effective September 1, 1969)

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