MAIN CONCLUSIONS AND RECOMMENDATIONS

1. The solution of the traffic problem in Miami's central business district must include measures to provide greater freedom in the movement of more traffic combined with other measures designed for easier access to destination points. It must provide freer movement of busses, trucks, taxicabs, and private passenger cars and better use of the off-street and on-street parking and loading facilities.

2. Use of the downtown streets to maximum capacity can be effected only by the orderly movement of vehicles in well-established lanes. To this end it is proposed, upon adoption of the regulations presented in this report, to apply and maintain distinct lane markings on the major streets where confusion and congestion commonly occur.

3. The development and extension of off-street parking and loading facilities to reduce the demands for onstreet parking and loading is essential. However, these are matters dealing mainly with the long-range relief of parking and loading problems and have been covered in the report of the Parking and Traffic Improvement Committee of Miami and in recommendations of the Miami Planning Board and the Division of Traffic Engineering concerning such requirements for new buildings.

4. In allocating curb space for different uses, the highest priority should be given to the requirements for moving traffic. Next in order should be loading zones and mass transportation stops and terminals. Taxicab stands as required to meet the needs should rank above the use of the curb for parking. Such storage of vehicles should have the lowest priority, since it is the most flexible and the least efficient use of curb space.

5. To reduce interference with moving traffic by vehicles that are entering and leaving parking spaces, it is recommended that parking be prohibited on Flagler Street and North and South First Streets between West First Avenue except adjacent to the Court House and Biscayne Boulevard, and on Miami and East First and Second Avenues between these streets. It is further recommended that parking be prohibited in other constricted locations in accordance with a schedule contained in the later discussion of this subject.

- 1 -

6. No substantial changes are recommended in the allotment of curb space for loading zones, except those warranted by changes in the character of building occupancy. Such changes will presently result in no appreciable change in street parking capacity.

7. To effect a substantial reduction in the number of busses on congested streets it is recommended that bus lines entering the central business district from different directions be further segregated and that bus terminals be more widely separated. In this way substantial reductions can be made in the numbers of busses passing critical points on Flagler Street, North and South First Streets, and Northeast First and Second Avenues.

8. It is recommended that Miami Transit Company Routes 6, 10, 11, 12, and 22 use Biscayne Boulevard south of Fifth Street and execute a clockwise loop over Southeast First Street, Southeast Second Avenue, and East Flagler Street with a terminal on East Flagler Street between Second and Third Avenues. It is also recommended that Miami Transit Company Route 1 use the same terminal, looping around Southeast Second Avenue, East Flagler Street, Southeast Third Avenue, and Southeast Second Street.

9. To combine terminal facilities for Miami Beach Railway Company's Routes "K" and "S" with the Coral Gables and South Miami bus routes, it is recommended that a common terminal be established on the east side of Southeast Third Avenue between First and Second Streets. Miami Beach busses will use Biscayne Boulevard, looping around Southeast Second Street, Third Avenue, and East Flagler Street and the routes from Coral Gables and South Miami will cross the Miami River on Southeast Second Avenue, looping clockwise over Southeast Second Street and Third Avenue, East Flagler Street, and Biscayne Boulevard.

10. It is recommended that Miami Transit Company Route No. 25 be shifted from Flagler Street to North Fifth Street, making a clockwise loop on Northeast First Avenue and First Street, and North Miami Avenue, using the terminal at the Post Office.

11. To facilitate the loading of busses entering the central business district from the west on Flagler Street and leaving westward on South First Street, it is recommended that busses that stop on Flagler Street between Southwest First Avenue and Miami Avenue stop next on Southeast First Street between Southeast First and Miami Avenues, and that busses that stop on Flagler Street between Miami Avenue and East First Avenue stop next on Southwest First Street just south of the Police Department. 12. A redistribution of taxicab stands in the central business district is recommended, generally reducing the number of cabs at individual stands, but distributing them more widely. By this plan, presented more in detail later in this report, it is proposed to make cabs available within shorter distances of various locations and at the same time reduce unnecessary storage at points where the demands are less, by reducing the capacities of many of the stands to two or three cabs.

13. A general revision of parking time limits in the central business district and the area immediately west of it extending to the Miami River, is recommended, based on the principle of graduation from fifteen minutes at points where the highest turnover is needed to ninety minutes at points farther out where longer period parking can be permitted. It is felt that no unlimited time parking should be permitted on the streets within the area covered by this survey, the only appropriate places for such parking within this area being entirely off the street.

14. To facilitate the movement of traffic along Southeast Second Avenue between Second and Flagler Streets, and to accommodate the bus traffic that is being recommended along this avenue, it is requested that traffic in these two blocks be restricted to north bound only.

15. The recommendations in this report provide the possibilities of substantial relief from congestion and confusion if conformance with the provisions is assured. This will require voluntary conformance with regulations by the vast majority of street users and supervision and enforcement adequate to require others to conform. This Division proposes to use every available means for interpreting the new regulations and requirements to encourage and facilitate voluntary conformance. Supplementing this, consistent supervision and enforcement of the regulations proposed herein are urged.

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DETAILED DISCUSSION OF CONCLUSIONS AND RECOMMENDATIONS

Better Use of Streets Needed.

The area covered by this report is bounded by North Sixth Street, Northwest Second Avenue, Northwest First Street, the Miami River, and Biscayne Boulevard. This is the central business district as defined in the City Code, supplemented by extensions to the west and south to include sections where somewhat similar problems exist.

The traffic problem in this concentrated business area is a combination of congestion and confusion which delay moving traffic on the one hand, and difficulty of access to destinations on the other. The purpose of this survey has been to develop ways in which these difficulties can be alleviated so that the purposes for which the district exists can be more effectively served.

The recommended improvements in the movement of traffic will affect all types of vehicles that use the streets-busses, trucks, taxicabs, and private passenger cars. Such movements must be made with reasonable dispatch if business is to continue at its present level, for present modes of transportation make it easy for persons desiring purchases or services to choose those areas where their desires can be most easily obtained.

Likewise, better use of off-street and on-street parking and loading facilities is essential. When parking and loading unduly interfere with traffic movement they drive traffic away from the area where this happens. The parking and loading problems, too, involve all classes of vehicles named above.

Proper balance between capacity for moving vehicles and facilities for handling them at their destinations is imperative to the solution of the acute problems in this area. To that end, the recommendations in this survey combine measures for improved traffic movement and for better use of street spaces that are available for parking and loading.

Orderly Movement Is Necessary.

Irregularities in the use of the streets, such as swerving from lane to lane, stopping too far from the curb to receive or discharge passengers or to park, and failing to maintain as many lanes as the street can provide, waste street capacity. Especially during the winter season, this cannot be tolerated in Miami if serious congestion is to be avoided. However, even now these practices are far too common and they can be expected to be much worse when strangers use the streets in much larger numbers.

To guide those who are susceptible to such guidance (and experiences in other parts of the City indicate that a very large majority are susceptible) and to provide the police with aids and indications in their enforcement of proper practices, it is proposed to mark the proper number of lanes in the major streets in the central business district when the provisions of this report have been adopted, to establish definitely the clear street widths for moving traffic. It is felt that this will greatly reduce the confusion and congestion.

Off-Street Parking and Loading.

Observations taken by Maurice H. Connell and Associates for the Parking and Traffic Improvement Committee of Miami last March showed that in the area within one-half mile of the intersection of East Flagler Street and First Avenue there were 10,438 parking spaces, including both on-street and off-street facilities, with a maximum daily usage of approximately 24,191 vehicles.

Of this total number of spaces about 23 per cent are onstreet along the curb. These accommodate about 37 per cent of the total parked vehicles, since the turnover is somewhat higher there than in off-street parking spaces. It will be seen that nearly two-thirds of the parking in this area was handled by off-street facilities. Recommendations were made in the report of that Committee for increasing the amount of off-street parking by nearly 3,000 car spaces.

It is becoming increasingly apparent that all new buildings should have adequate off-street parking and loading facilities within usable range, to maintain a permanent balance between parking and loading demands and facilities. It is felt that while this will not provide any substantial immediate relief it will avoid perpetuation of the present condition of inadequate parking and give an opportunity for solution of the immediate problem through measures like those presented in the above report. Some relief can be provided during the winter season immediately ahead by increasing the turnover in the use of the available curb space in the downtown business district after adjustments have been made to take care of the various requirements on curb space imposed by measures to reduce interference with moving traffic, to take care of loading, and to accommodate busses and taxicabs. The function of this survey is to recommend measures for providing such relief.

Priorities on Curb Space.

Curb space cannot be used indiscriminately for different purposes. Some uses are quite inelastic and must be definitely located with respect to certain permanent features. Others are somewhat more elastic and can be adjusted to fit available spaces and other requirements.

The highest priority on curb space is the prohibition of parking and standing of vehicles where they will interfere with moving traffic or will obstruct the view across a corner at an intersection. State traffic laws and local traffic ordinances specify certain locations where standing or parking is always illegal. In addition to these, irregularity of street widths between curbs and narrowness of streets makes further restrictions necessary to relieve these "bottlenecks" at certain points. Some standing and parking prohibitions will be recommended in this report for that purpose.

In the actual use of curb space for the standing of vehicles the highest priority is for loading zones where vehicles may stop to receive or discharge passengers or merchandise and where no off-street facilities are available for the purpose. Loading facilities must be located close to the places where the loading demand is generated --that is, as close as practicable within areas where standing or parking need not be completely prohibited. It should be recognized, however, that wherever offstreet loading facilities are possible provision should be made for them to conserve street space.

Mass transportation stops and terminals stand close to loading zones in priority on curb space. While they are somewhat more elastic as to exact location, they are controlled by the adaptability of streets to the handling of mass transportation routes, the direction of traffic flow, and the centers of public demands for bus loading and unloading. Taxicab stands are somewhat more flexible as to location, but they need to be relatively close to centers where the demand for taxicab service exists. Hence, they should have a higher priority than general parking.

Parking--that is, the storage of vehicles on the streets--monopolizes curb space without any possibility of rendering any service until the owner or driver returns. In this regard it differs from all of the other uses of curb space, each of which may serve many more persons than individual parking can. Consequently, street parking in the central business district should be confined to those curb spaces which are not needed for the other uses that have been enumerated above.

These various street and curb uses will be discussed more in detail under their respective headings.

Prohibiting Parking to Conserve Street Capacity.

On several sections of streets in the central business district parking has been prohibited on one or both sides to maintain adequate width for handling the required number of lanes of traffic and to avoid "bottlenecks". With traffic rapidly increasing congestion at other locations is becoming critical and extension of the "No Parking" restriction is necessary.

The prohibition of parking on the three main east and west streets in the central business district and on some of the avenues between these streets has become imperative. Flagler Street and N. W. First Street are wider between Miami Court and the F.E.C. Railway than they are east of Miami Court and it is not considered necessary to prohibit parking within these two blocks adjacent to the County Court House. However, east of this point both streets are too narrow to carry the volume of traffic that is required of them when there are frequent interruptions by vehicles entering and leaving parking spaces in addition to the more essential movements into and out of loading zones, bus terminals, and taxicab stands.

On South First Street between the F.E.C. Railroad and Biscayne Boulevard, the narrowness of the pavement throughout and the irregularities in street width makes the prohibition of parking on both sides necessary. The prohibition of parking on Miami Avenue, East First Avenue, and East Second Avenue between North First Street and South First Street is important because of the narrowness of the pavement in these blocks.

The above recommended changes will reduce the number of parking spaces by 153 individual stalls. When this is compared with a potential capacity of 866 stalls in these forty-eight linear blocks of curb space it will be seen that more than eighty per cent of the curb space has already been devoted to other uses than the storage of vehicles and, hence, the reduction is not great.

In addition to the above there are seven sections of streets from which the prohibition of parking is recommended, totaling 93 car spaces. The following is a brief description of each of these locations, giving the number of spaces that will be involved and the reasons for such recommendations.

- S. W. Second Street, south side, Miami Avenue to F.E.C. Railway-four spaces, the only ones on either side of a street that is very narrow and carries heavy traffic.
- S. W. Second Avenue, west side, Flagler Street to Miami River--twenty-eight spaces scattered along four blocks on which traffic is becoming increasingly heavy, particularly south bound.
- S. W. First Street, north side, Second Avenue to Third Avenue-four spaces constituting the only legal parking on this street between Second Avenue and the Miami River, where street widths are very irregular.
- N. W. First Court, west side, from First Street to Fourth Street--thirty-one spaces. This street is too narrow for parking on both sides and prohibition on one side is recommended to provide additional capacity.
- N. W. Fifth Street, north side, First Avenue to Second Avenue--13 spaces. Street is too narrow

for parking on both sides and moving heavy traffic.

- N. W. Second Avenue, west side, Fourth Street to Fifth Street - 11 spaces. This will extend the prohibited parking zone on this side of this avenue from the Miami River to North Fifth Street.
- N. W. N. River Drive, southwest side, Flagler Street to First Street - 2 spaces at a point where there is considerable congestion.

Changes in Loading Zones.

Investigation of the distribution of spaces allocated as loading zones in the central business district did not indicate any substantial changes that would alter the use of the curb space appreciably. These zones are changed when alterations in building occupancy or other conditions warrant. Hence, no recommended changes are detailed in this report.

Re-routing of Busses Proposed.

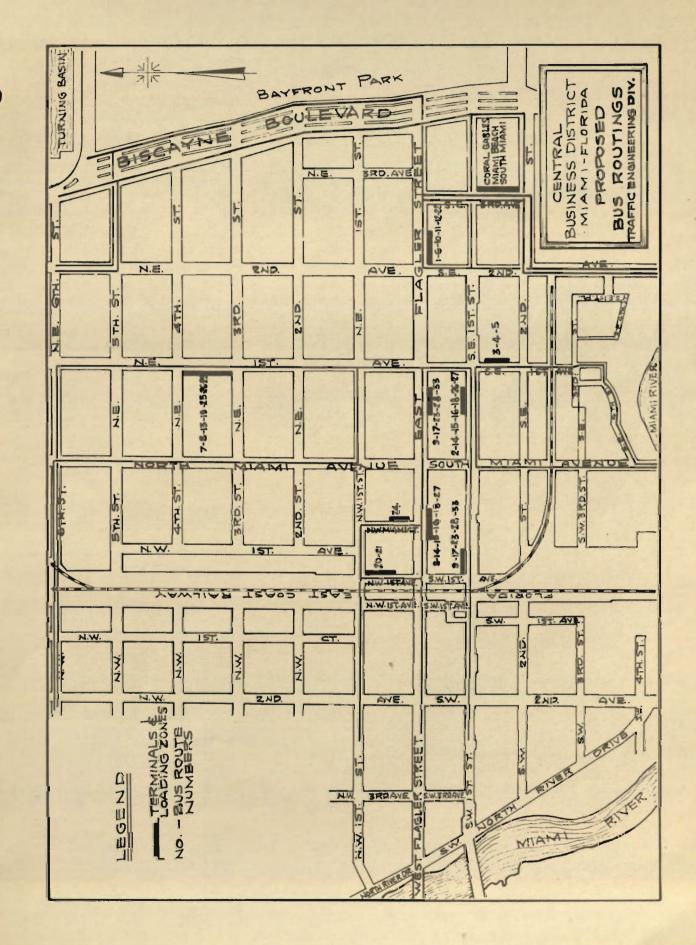
Present routing of busses within the central business district results in some serious disadvantages that can be substantially reduced by re-routing and re-location of terminals. Among these disadvantages are the following:

- 1. There is a high concentration of busses on Flagler Street, particularly in the vicinity of its intersection with East First Avenue.
- 2. Several local and inter-city lines make left turns from N. E. First Avenue onto Flagler Street and several must maneuver through traffic to make left turns again into N. E. Second Avenue, both of these being dangerous movements.
- 3. There are now high concentrations of pedestrians waiting for busses at several points where pedestrian traffic would otherwise be dense, thus creating serious sidewalk congestion, particularly on Flagler Street.
- Certain lines operate on narrow streets for longer distances than are necessary to provide the needed service.

5. Lines serving different sections of the City are not as completely segregated as is desirable in their use of the downtown streets, and, as a result, busses travel more miles in this district than is necessary to meet the demands.

To accomplish substantial improvements in these conditions, the following changes in bus routings and terminals are proposed:

- Shift Miami Transit Co. Bus Routes 6, 10, 11, 12, and 22 from N. E. First Avenue and N. E. Second Avenue between N. E. Fifth Street and Flagler Street to Biscayne Boulevard. Extend these south to S. E. First Street, looping clockwise west on S. E. First Street, north on S. E. Second Avenue, east on Flagler Street, and north on Biscayne Boulevard. Establish the terminal for this route on East Flagler Street between Second and Third Avenues.
- 2. Re-route Miami Transit Co.'s Route 1 clockwise north on S. E. Second Avenue to Flagler Street, east on Flagler Street to Third Avenue, south on S. E. Third Avenue to Second Street, and east on S. E. Second Street to S. E. Second Avenue, turning south there. This route will use the same terminal as in (1) above.
- 3. Shift the Miami Beach Railway Co.'s Routes "K" and "S" from N. E. First Avenue and Second Avenue between N. E. Thirteenth Street and Flagler Street to Biscayne Boulevard, with south bound busses continuing to S. E. Second Street and looping clockwise east on S. E. Second Street, north on S. E. Third Avenue, east on Flagler Street and then turning north on Biscayne Boulevard. The terminal for these bus lines will be on S. E. Third Avenue between First and Second Streets.
- 4. Shift Coral Gables and South Miami Bus Routes to enter and leave the central business district on S. E. Second Avenue and S. E. Second Street, executing a clockwise loop north on S. E. Third Avenue, east on Flagler Street, south on Biscayne Boulevard, and west on S. E. Second Street. These lines will use the terminal on S. E. Third Avenue jointly with the Miami Beach Railway Co.
- 5. Shift Miami Transit Co.'s Route 25 from N. W. Second Avenue south of Fifth Street to run over N. W. and



N. E. Fifth Street to N. E. First Avenue, south on N. E. First Avenue, west on N. E. First Street and north on Miami Avenue to Fifth Street, turning west there to the present routing. The terminal for this route will be combined with others on N. E. First Avenue opposite the Post Office.

6. Reassign the bus stops at the present terminals on Flagler Street between West and East First Avenues, and on South First Street between S. E. and S. W. First Avenues, to have busses stop at diagonally opposite points but not at consecutive ones. Busses on Routes Nos. 2, 14, 15, 16, 18, and 27 would stop on West Flagler Street between Miami Avenue and First Avenue and again on S. E. First Street between S. E. First Avenue and Miami Avenue. Busses on Routes Nos. 9, 17, 23, 28, and 33 would stop on East Flagler Street between Miami Avenue and First Avenue and again on S. W. First Street between Miami Avenue and S. W. First Avenue.

Figure I shows the proposed new routings along with the present routings that will not be changed.

Table I shows the effect of the recommended bus re-routing on the number of busses that will make right and left turns within the central business district during the daily peak hour of operation. It will be seen that the number of left turns will be reduced 51 per cent while the number of right turns is increased 61 per cent but the latter cause much less interference with other traffic.

Table II shows the changes in the numbers of busses that will be effected in the various key blocks within the central business district during peak hours. Farticularly significant is the reduction of 68 busses per hour in the block between First and Second Avenues on East Flagler Street, all of which involve left turns into Flagler at First Avenue and 42 of which involve left turns from Flagler into Second Avenue in the present routing.

The number of blocks of operation in the central business district during the peak hours will be reduced from 1548 under present routing to 1059 under the proposed routing, a reduction of 31 per cent. This is particularly significant because it means that the mileage which busses will operate on the streets of downtown Miami will be materially reduced without any reduction in the availability of TABLE I

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BUS TURNING MOVEMENTS IN CONGESTED DOWNTOWN AREA

	Proposed	Left Turns	20%000000222%%900	166	- 51%
		Right Turns	,	444	+ 61%
	Present	Left Turns	08200086402042202	327	•••••
		Right Turns	цшошшоо30000500rog0	271	• • • • •
	Location		 N. E. 2nd Ave 5th Street N. E. 1st Ave 5th Street N. Miami Ave 5th Street N. Miami Ave 5th Street N. Miami Ave 1st Street W. Flagler St 1st Street W. Flagler St 1st Street Flagler St 1st Street Flagler St 1st Street Flagler St 1st Street S. Flagler St 1st Street S. B. 3rd Ave 1st Street S. E. 2nd Ave 1st Street S. B. 3rd Ave 1st Street S. B. 3rd Ave 1st Street S. B. 3rd Ave 1st Street S. W. Ist Ave 1st Street S. Wiemi Ave 1st Street S. W. Ave 1st Street S. W. Ist Ave 1st Street S. W. Ist Ave 1st Street S. W. Street S. Wiemi Ave 1st Street 	Totals	Change

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busses. As a result of this conflicts with other types of traffic should be substantially reduced and bus running times should be decreased.

TABLE II

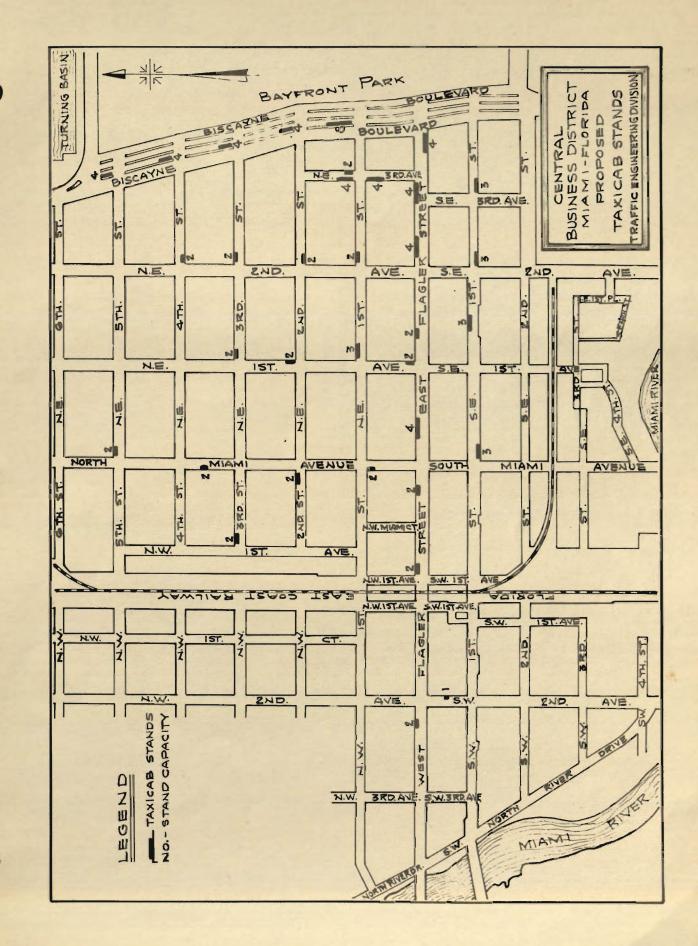
NUMBERS OF BUSSES IN KEY BLOCKS DURING PEAK HOURS

Location	Busses	per Hour	
	Busses per Hour		
	Present	Proposed	
 N.E. 2nd Ave Flagler St. to 5th St. N.E. 1st Ave Ist St. to 5th St. Flagler St E. 1st Ave. to W. 1st Ave. E. Flagler St 1st Ave. to 2nd Ave. E. Flagler St 1st Ave. to 3rd Ave. N.E. 1st St Miami Ave. to 1st Ave. N. Miami Ave 1st St. to 5th St. S.E. 3rd Ave Flagler St. to 2nd Ave. S.E. 2nd St 3rd Ave. to 2nd Ave. S.E. 2nd Ave 1st St. to 5th St. S.E. 2nd Ave 1st St. to 1st St. S.E. 2nd Ave Flagler St. to 2nd Ave. S.E. 2nd Ave 1st St. to Flagler St. S.E. 1st St 2nd Ave. to 3rd Ave. S.E. 1st St 2nd Ave. to 3rd Ave. S.E. 1st St 1st Ave. to 3rd Ave. S.E. 1st St 1st Ave. to 1st St. S.E. 1st St 1st Ave. to 1st Ave. S.W. 1st St 1st Ave. to 1st Ave. S.W. 1st St 1st St. to 1st Ave. S.W. 1st Ave 1st St. to 2nd St. S. 2nd St 3sE. 1st Ave. to 1st Ave. S.W. 1st Ave 1st St. to 4th St. S.E. 1st Ave 1st St. to 4th St. 	42 78 111 64 68 26 29 29 0 5 0 0 5 5 91 70 5 33 21 70 4 4	0 10 43 60 55 33 55 55 0 74 0 13 13 66 4 4 4	

Redistribution of Taxicab Stands.

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It is to be recognized that taxicabs have a definite type of transportation service to perform--more personalized.



than bus transportation can provide and servicing many more persons each than private passenger cars. Hence, there is a legitimate demand for the allocation of curb space for taxicab stands where persons desiring such specialized service will be able to obtain it without delay.

The capacity of taxicab stands should be based on demand. Storage of cabs beyond the number required to meet the demand should not be done on the public street.

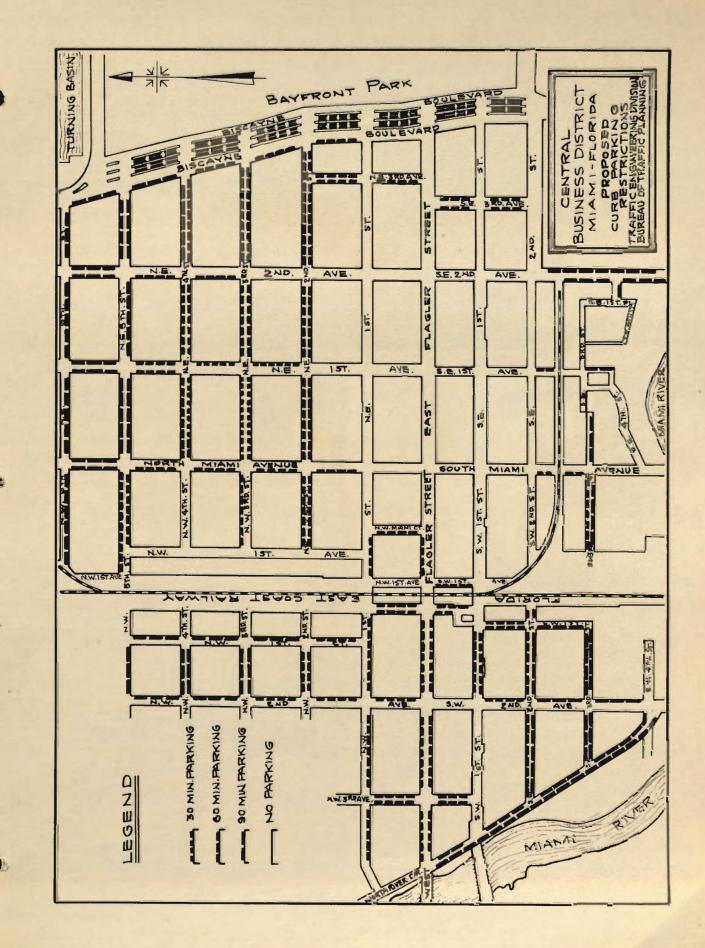
Figure 2 shows the recommended locations and capacities of taxicab stands in the central business district. While the total capacity is increased from 49 cabs in the stands now designated to 96 in those proposed, the stands are more widely distributed, making taxicabs more readily accessible from various points within this area, but in several cases reducing the number of cabs at individual points to more nearly fit the demands.

Revision of Parking Time Limits.

A general revision of the time limits on parking is proposed within the curb spaces that remain after allocations have been made to demands of higher priority. The number of spaces within the area indicated on the map in Figure 3 will be reduced from approximately 2,080 to about 1,835. However, by the revision in time limits that is proposed the number of cars that can be accommodated daily if drivers will comply with these regulations, should be about 38 per cent greater than the number that is now being normally served in the same area under present regulations and practices. This is based on observations of parking in sample blocks and computations of possible improvements in these and other similar ones throughout the central business district.

It will be seen from Figure 3 that throughout this area all street parking will be limited as to time, ranging from 30 minutes to 90 minutes. It is felt that in an area with as great demands for curb parking space as in the central business district of Miami there is no place for all-day parking on the streets.

With a graduated plan of parking time limits, persons who must park longer than the lower limits in highly



congested places will permit, will find longer period parking corresponding to their needs farther out. Without such graduated parking limits they would find it necessary to go out beyond the fringe of all-day parkers that would surround the more concentrated portion of the central business district, to find accommodations for their cars.

While the primary purpose of this survey has been to deal with the improvement in the use of curb spaces within the central business district, the value of certain measures for providing off-street parking has been emphatically demonstrated. Builders of all types of properties within this area should recognize the need for off-street parking to provide the access which they desire for customers and clients who will patronize the occupants of those buildings. Unless there is an adequate balance between parking demands and parking facilities that are within reasonable distances of destinations or are supplemented by mass transportation facilities, it can only be expected that business decentralization will result from the appeals that similar business houses with better parking facilities in the outlying areas, will make

North Bound Traffic on S. E. Second Avenue.

To provide better traffic movement along S. E. Second Avenue between Second Street and Flagler Street and to facilitate the bus movements that are proposed on this avenue between S. E. First Street and Flagler Street, it is recommended that the City Commission restrict traffic in these two blocks to north bound only. The avenue is narrow in both blocks, too narrow for two lanes of traffic in each direction. One lane in each direction does not adequately handle the traffic at peak. Limiting the movement to one direction will enable an uneven number of lanes to be used and thus accommodate more vehicles.

Owing to the short curb radii at the intersections of S. E. First Street and Flagler Street with S. E. Second Avenue, the looping of busses with right turns at these two intersections, as proposed earlier in this report, will require the one way movement, to avoid conflict with vehicles in the opposing direction on S. E. Second Avenue.

Conformance With Regulations Will Be Necessary.

The plans recommended in this report, particularly those dealing with loading and parking regulations, will depend on public conformance for substantial success. For example, the parking of vehicles in loading zones for longer periods than are necessary for actual loading and unloading will cause vehicles seeking access to such points for loading and unloading to double park and thus obstruct moving traffic. Likewise, parking over the time limit in a limited time parking space will reduce the number of cars that can be accommodated by that space during a normal day and, thus, reduce access to business houses in this district.

Upon adoption of this plan the Division of Traffic Engineering will devote considerable attention through publicity and any other available public educational channels, to the proper use of the streets by both moving and parked vehicles. It is recognized that proper interpretation of such a plan is essential to adequate public participation to enable supervision and enforcement to require dissenters to conform.

It is to be pointed out here that adequate supervision and enforcement will be essential to the success of the plan that is here recommended. This plan is based on measures for refinement in the use of the streets and the curb spaces to enable the existing facilities to handle more effectively the loads that are imposed upon them. To this end, aggressive supervision and enforcement of the proposed regulations are strongly urged, with special attention to those things that will facilitate the movement of the largest number of vehicles and the accommodation of the largest number at the curb for loading and/or parking.