

A FARE FREE EXPERIMENT
FOR
DOWNTOWN LOS ANGELES

PRELIMINARY
REPORT

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Prepared by: Planning Department

May 21, 1975

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

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JACK R. GILSTRAP
GENERAL MANAGER

May 21, 1975

To: Members of the Board of Directors

From: Jack R. Gilstrap

Subject: Fare Free Experiment for Downtown Los Angeles
Preliminary Report

SUMMARY

This report describes our preliminary analysis of a fare free experiment for downtown Los Angeles. It does not consider other areas of the County and is limited to base period projections, from 9:00 AM to 3:00 PM, Monday through Friday. With available data provided by Wilbur Smith and Associates, taken from their study of the area this Spring, staff has determined that any induced ridership as a result of a fare free zone will lengthen the travel time and stress current seating capacities. Cost analysis of the projections are, therefore, predicated upon:

1. Vehicles needed to maintain present frequencies due to increased travel time.
2. Vehicles needed to maintain seating capacities for induced ridership.
3. Loss of revenues from present riders and transfers on downtown routes (except Minibuses)

Our major conclusions are:

- A fare free zone can be implemented in downtown Los Angeles, but will involve the use, in non-peak only, of 75-85 additional buses at a FY 1976 cost of approximately \$3 million.
- Although the peak-period analysis is not completed at this time, peak hour or weekend service will obviously require additional coaches and manpower.
- Four techniques are feasible for operation of a fare free zone:
 1. Pay as you enter; zone checks at fare free boundary
 2. Inbound trips: pay as you enter
Outbound trips: pay as you leave
Through riders receive "checks"

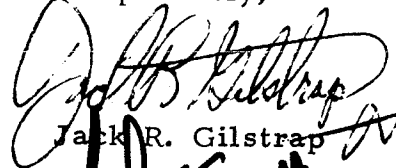
3. D.A.S.H. Cards given to fare free rider
 4. Honor System: fare free riders ride without controlling factors.
- A negative impact on present ridership may result from longer travel time through zone, overloading vehicles and disincentives for use of monthly passes.
 - Federal Funding is not assured for FY 1976 and perhaps FY 1977.
 - Local matching funds are necessary from local government to insure program, with a commitment to continue program if experiment is successful.

RECOMMENDATION


The Board of Directors is requested to direct the staff to proceed on this program by developing one or all of these alternatives:

1. Continue projections to include a fare free zone effective at all times, including peak hours and weekends.
2. Analyze one or more other areas in the County as potential fare free zones.
3. Present an alternative, separate distribution system for a nominal or free fare, including expansion of the minibus program.

Respectfully,


Jack R. Gilstrap


By George L. McDonald
Manager of Planning & Marketing


By Stephen T. Parry
Coordinator of Special Services

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES PRELIMINARY REPORT

INTRODUCTION

At its meeting of April 23, 1975, the Board of Directors of the Southern California Rapid Transit District received a suggestion from the Mayor of the City of Los Angeles that consideration be given towards the establishment of a fare free zone in the downtown area. Approximately seven cities in the United States currently operate a fare free zone in their CBD. (See Appendix) After discussion, the District's Board issued a resolution that the staff explore such a program, broadening the study to include other areas of the County as well.

A meeting of District staff with representatives of the City and County of Los Angeles was held on May 8, 1975, to discuss the approach of such a study, and to review potential items that should be included. It was the opinion of those present that a preliminary report should be prepared as soon as possible for comment by the District's Directors and by the City.

Detailed evaluation of final alternatives necessitates a longer period of study to allow for careful analysis of existing routings, load factors, and trip patterns so a concise proposal may be adopted.

District staff has been fortunate to use the services of Wilbur Smith & Associates, who has been studying the downtown area in an analysis of the effectiveness of present routings with the shifting employment patterns. Their preliminary travel surveys have proved invaluable for us in the initial response to this proposal.

As time permitted, this preliminary report deals only with the Central City of Los Angeles, and the various mechanics of a fare free zone during weekday non-peak hours, 9:00 AM - 3:00 PM. Staff will return with a complete report, including a twenty-four hour, seven days a week proposal for consideration in two weeks.

OBJECTIVES FOR A FARE FREE EXPERIMENT

As the flat-fare program is primarily designed to encourage travel by bus by offering service at 25¢, a fare free zone could apply to a small area that, as a major center for employment and retail trade, must seek alternatives to lessen congestion while stimulating activity. A fare free zone could be a partial solution to these objectives:

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

- 1) Relieve traffic congestion.
- 2) Encourage peripheral parking.
- 3) Stimulate retail trade activities.
- 4) Reduce intra-CBD auto trips.
- 5) Attract new transit commuters.
- 6) Increase mobility by encouraging a more varied use of downtown.
- 7) Conserve gasoline.
- 8) Utilize existing bus seats more efficiently.

All of these objectives anticipate that by allowing citizens a free ride, a potential exists to increase ridership. This preliminary report will evaluate these objectives and discuss various means of implementation.

ANALYSIS OF FARE FREE AREAS

• Study Area

Staff had only enough time to analyze the downtown Los Angeles area as a potential site for a fare free experiment. Further analysis, after discussion of the various alternatives, will be performed in other potential sites throughout the County.

The Central City of Los Angeles is an area roughly bounded by the Hollywood Freeway on the North, the Harbor Freeway on the West, the Santa Monica Freeway on the South, and San Pedro Street on the East. This area covers 265 square blocks, approximately 2.24 square miles. Contained in this area are major retail centers, large employment complexes, many civic and governmental agencies, a convention center, several entertainment facilities, and a substantial degree of light manufacturing, including the garment industry. Map 3 shows the high density development within the CBD.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES PRELIMINARY REPORT

- Present Route Structure

The District operates three types of routes within the CBD:

- 1) Local lines which enter the area from two distinct points (through routes).
- 2) Local lines which enter the CBD from one point (terminal routes).
- 3) Express, limited, flyer, and interurban services which enter and leave the CBD with restrictions that prohibit local riding (expedited service).

Of the 63 separate routes that operate within the CBD, 18 are considered through routes. There are many benefits to such a route structure, including a better usage of passenger seats; a considerable turnover is experienced because inbound passengers are alighting at a CBD stop while passengers destined outbound are boarding. This simultaneous movement utilizes dwell time at a stop to the highest efficiency possible. Local routes have terminals disbursed through the CBD. Ridership trends on this type of route indicate that inbound buses are full and experience a discharge pattern through the CBD to the terminal. Conversely, outbound trips experience heavier boarding from terminal to the fringe of the CBD. Seats are usually available on these lines for passengers who would board and alight within the CBD.

The District operates many expedited services, including express, limited, and flyer trips on local lines at peak hours. In addition, many interurban services operate with restrictions against local riding to insure seats for through passengers and a minimum amount of delay. Although some of these routes use street loading, their eventual destinations are generally beyond the range of local lines. Eleven lines originate in the RTD/Greyhound Station, and most have limited street stopping in the eastern section of the CBD.

- Coverage

The CBD area does not receive a balance of bus service. Rather, certain major streets have many lines operating on them. Map 1 indi-

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES PRELIMINARY REPORT

cates the downtown routes that travel through the area, and Map 2 shows the routes with terminals within the CBD. It is quite evident that transit service must be placed so that it is convenient for the existing ridership. As a result, the following patterns are evident as "transit corridors" listed in order of importance:

- 1) North/South Arterials
 - A. Broadway
 - B. Hill Street
 - C. Spring/Main Streets Couplet
 - D. Olive Street
 - E. Figueroa Street

- 2) East/West Arterials
 - A. 7th Street
 - B. 5th/6th Streets Couplet
 - C. 1st Street
 - D. 8th/9th Streets Couplet

While a passenger might experience 30-second conglomerate frequencies on Broadway because of the six local lines operating along this thoroughfare, another passenger wishing to travel on Figueroa Street would experience one line with a 20-minute frequency.

Figure 1 indicates the major local lines experience during the base period on an average weekday (See Figure 1 on the following two pages). As these lines operate in frequent service along the heavily traveled streets, they are undoubtedly the most susceptible to usage under a fare free program. It must be noted that these lines are also heavily used at all times of the day, and standing loads are not uncommon during daylight hours.

For example, eight local lines in Figure 1 have average load factors which exceed 1.0, indicating that as a rule standees are present on all buses of the line at the point of departure.

Figure 1

BASE HOUR LOAD FACTORS
ON MAJOR LOCAL LINES LEAVING THE CBD

Line No.	Base Period Buses Per Hour	6 Hour Passengers	Average Bus Hour Passengers	Hourly Seats Available (BPH x50)	Average Load Factor
3	4	1451	242	200	1.21
4	6	1938	323	300	1.08
49	3	825	138	150	0.92
86	2	157	26	100	0.26
9	4	1835	306	200	1.53
28	4	1485	248	200	1.24
29	4	1579	263	200	1.32
83	10	2117	353	500	0.71
26	12	3764	627	600	1.05
44	6	1677	280	300	0.93
2	6	915	153	300	0.51
8	3	809	135	150	0.90
47	4	826	138	200	0.69
75	3	879	147	150	0.98
92	6	1082	180	300	0.60
5	6	1401	234	300	0.78
6	6	1760	293	300	0.98
7	5	1686	281	250	1.12
12	3	1282	214	150	1.43
25	4	1063	177	200	0.89
42	8	1158	193	400	0.48
91	6	933	156	300	0.52
93	4	601	100	200	0.50
94	6	1067	178	300	0.59

BASE HOUR LOAD FACTORS
ON MAJOR LOCAL LINES LEAVING THE CBD

Line No.	Base Period Buses Per Hour	6 Hour Passengers	Average Bus Hour Passengers	Hourly Seats Available (BPHx50)	Average Load Factor
53	2	210	35	100	0.35
51	2	256	43	100	0.43
Total:	129	32,756	5463	6450	0.85

Note:

Figures for load factors over 1.0 indicate standees at peak load locations. It is possible that standees occur within the CBD due to local riders; these occurrences are not included.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

AVAILABLE PASSENGER SEATS

The percentages in Figure 1 do not include the following trips that are now being performed:

- 1) Passengers with both origin and destination within CBD.
- 2) Transfers between buses within CBD.
- 3) Minibus trips (Line 200).

In the study performed by Wilbur Smith & Associates in early Spring of this year, they recorded 12,000 one-way passengers that claimed they had origins and destinations within the CBD on an average weekday. Assuming that most of these passengers had a similar reverse trip, this figure would be expanded to approximately 25,000 rides during the 12-hour period. It must be remembered that Minibus ridership is not recorded in this study. In a fare free zone experiment, these riders do not pay any fare, and the District must assume a respective loss of revenue. Assuming an average fare of 15¢ per passenger (two 10¢ transfer charges plus one 25¢ fare for every three people), we estimate a loss of revenue of \$4,000 a day, which would amount to \$1.6 million annually.

If, as a result of a fare free experiment, any additional ridership is generated, the District would not lose any more revenue, but must accommodate for the additional ridership. The next section will deal with two approaches in projecting additional expenses and equipment.

EQUIPMENT REQUIREMENTS

The following formulas have been developed to indicate potential equipment required in addition to the existing coach assignments on major local lines only. It is assumed that express, limited, flyer, and busway lines will not participate in the fare free experiment.

- 1) To maintain present headways on local lines:

Present Running Time + Induced Ridership (boarding and alighting within fare free zone) + Zone Check at Boundary = New Adjusted Running Time. Assum-

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

ing no more than 10" on through lines one-way = 36 buses.
No buses were added on terminal lines within CBD.

- 2) To facilitate additional seating capacities in projection for induced ridership, staff, for estimate purposes only, believes that the present figure of 25,000 rides generated within the CBD would double if a fare free zone were created. This additional ridership represents only 6% of the total automobiles entering the CBD as shown in Figure 1. The following formula would provide for the addition of passenger seats to maintain an even flow affecting more frequent service on the major local lines. Rather than schedule vehicles only within the CBD, it would be necessary to add equipment to the total line structure as a general improvement to the schedules and in ease of passenger comprehension:

63 Lines Serving CBD + 25,000 daily induced rides = 400 rides per line (assuming equal distribution);

400 Rides per Line + 6-hour base period = 70 Rides per Line per Bus.

With this formula, buses should be added to the following lines which will, as an average, approximate one hour in length (one way):

- A. Line with terminals in CBD (6):
42; 53; 86; 91; 93; and 94 + 6 buses.
- B. Through lines (18): 2; 3; 4; 5; 6; 7; 8; 9;
12; 25; 26; 28; 29; 44; 47; 49; and 75 + 36 buses.

COST FACTORS

Any implementation of a fare free experiment will result in lost revenues. As stated previously, Wilbur Smith & Associates estimates 25,000 daily rides with origin and destination within the fare free zone. At an average of 15¢ a ride based upon two out of every three people paying a 10¢ transfer which would be eliminated, and one paying 25¢, this amounts to \$4,000 lost revenue daily. In addition, the following variables that could contribute to less revenue are given, although no estimates are projected at this time.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

- 1) Loss of monthly pass sales (40 rides a month = breakeven point).
- 2) Loss of 10¢ transfer (included partially above).
- 3) Loss of internal CBD trips that are not counted in study.
- 4) Minibus revenues (not to be counted if the entire operation is eliminated; buses may be therefore assigned to offset additional equipment requirements on regular lines).

In the previous section, and above, estimates include sufficient data to project costs to perform such an experiment. For each additional coach required to (a) maintain present headways, and (b) provide for capacity of induced ridership, an incremental cost formula was applied for six hours of usage during the base period only. Trippers could be assigned from peak hours service to these additional requirements, noting no new equipment necessary. At six hours, straight time, based for fiscal 75-76, the per bus cost is \$18,700. No estimates were made for such a program effective at all times due to lack of time. Any induced ridership on peak hours will require additional coaches beyond the present vehicle requirement. This is a conservative estimate, at best, and could extend to time and one-half for computation.

With the projections given previously, staff estimates:

- 1) Buses needed to maintain present frequencies: 18 through routes + 36 X \$18,700 annually = \$673,200
- 2) Buses needed to provide for additional seating; 18 through routes and six terminal routes: + 42 X \$18,700 = \$785,400.
- 3) Lost revenue of present intra-CBD riders; 25,000 a day @ 15¢ average: $\$3,750 \times 255 = \frac{\$2,000,000}{\text{FISCAL YEAR 75-76}} = \frac{\$3,458,600}{\text{(approx. total)}}$

These figures account for base period coaches required. As they are but projections, staff believes that until actual schedules can be rebuilt and ridership counts taken, the total cost and equipment could fluctuate between 70-85 buses, and therefore three to four million dollars annually. No projections have been performed for a fare free experiment at all times, including Saturdays and Sundays. As the above costs are indicative of only six hours, fare free zones at peak hours and at all hours, will not only cost more, but new additional equipment will be required at a greater ratio because of the peak loading presently experienced.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES PRELIMINARY REPORT

Weekend fare free service would entail additional manpower not assumed in the weekday experiment. As our work rules specify a five day week, and trippers must be used for weekday peak hours, present operators are utilized primarily for weekday service only.

OPERATING METHODOLOGY

There are several ways of implementing a fare free zone in the CBD. Each involves some degree of policing to insure that passengers outside the fare free zone are paying the regular rates of fare. On a separate system, such methods would be unnecessary as all stops would be contained within the fare free area.

1) Pay As You Enter (PAYE):

All passengers boarding outside the fare free zone and those boarding within but destined outside the zone would receive a coded "check" indicating line, direction, time and date. Checks would be collected at the point where the vehicle leaves the free zone; those without checks would either pay a fare or leave at this point. This involves one delay in each direction; most local lines are at peak loads at their point of departure from the CBD so standees must be expected during daylight hours.

2) Inbound - Pay As You Enter (PAYE), Outbound - Pay As You Leave (PAYL):

Depending upon direction, buses destined towards the fare free area would require patrons to pay upon boarding. Those buses leaving the area would require patrons to pay upon leaving. Passengers on through routes destined through the fare free area would ask for a check to indicate that a fare was paid. This plan would allow for using both doors for boarding and alighting in the fare free area to limit delays due to any increases of fare free rides. Outbound buses could either check passengers at the free zone boundary or have passengers leave via the front door. Some confusion in boarding can result outside the zone, but as Seattle relates, all passengers pay as they leave on outbound trips. Substantial boarding patterns are evident on District service, especially in the Western, Northern, and South Central areas directly adjacent to the CBD.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

3) DASH Cards:

An abbreviation of Downtown Area Short Hop (DASH) concept is practiced by Dayton, Chattanooga, Birmingham, Duluth, and other smaller cities that do not experience standees at any time. Fare paying passengers pay as usual when boarding the vehicles. Riders wishing to take advantage of the fare free zones receive a 12 X 7 inch plastic "card" and one identified as a DASHER. At the end of the zone, the operator checks to see if any DASHERS are still on board; evidence by the bright color and size of the card prohibits concealment by the DASHER.

4) Honor System:

Developed in Switzerland, modified programs of honor systems are in practice in all Swiss cities, and in Amsterdam, Munich, Frankfurt, and Dusseldorf. Although no fare free zone exists, all fare collections are maintained outside the vehicle. It is the passengers' honor and responsibility to pay the appropriate fares, dependent upon distance traveled. Fines and imprisonment are possible deterrents to abusers of the program. In our concept, those wishing to ride within the fare free zone would merely board the vehicle and state their destinations. No additional tickets or enforcement would be necessary. Inspectors could be used to observe this operation on a random basis. Although susceptible to an unknown level of abuse, this plan could save valuable time because it does not require additional checks to be issued, uses both doors as intended, and eliminates a zone check at the peak point of the line.

- Note: Seattle has allowed for one possible problem in their program to limit abuse. In the instance a passenger refuses to pay a fare, although he is obviously outside the fare free zone, operators are instructed to complete a form and put it in the fare box as obviously as possible, but with no verbal comment. Assuming that actions speak for the operator, passengers will know that records are being kept of abusers of the program.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

STATUS OF FARE-FREE DEMONSTRATION PROGRAM FUNDING

As a result of Section 201 of Title II of the National Mass Transportation Assistance Act of 1974, the Congress authorized \$20 million for each of the fiscal years ending June 30, 1975 and June 30, 1976, to carry out the provisions of a fare free mass transportation demonstration; attached is a copy of Title II describing these provisions (See Figure 2, following). Even though these funds were authorized, Congress did not appropriate any monies to implement the program.

On May 13, 1975, the House Appropriations Subcommittee on Transportation concluded hearings on the Urban Mass Transportation Administration's (UMTA) budget for fiscal year 1976. No funds relative to this program were provided for in the budget. Under the Service and Methods (S&M) Demonstration Program within the UMTA Office of Transit Planning, which would be responsible for the fare free program, there were only \$9.25 million requested for "exemplary" and "experimental" demonstrations. However, the "experimental" program's basic objective is "to expand the knowledge base" for transit and provide for, among other things, analyses of "relative service changes" and "fare variations." It is felt by some officials in Washington that if any funds were appropriated for a fare-free demonstration, they would fall within this program; it is currently projected at a \$4.25 million level in fiscal 1976. By way of contrast, the total S&M demonstration program has declined from \$12.25 million in fiscal 75 to a proposed \$9.25 million.

Although the appropriations subcommittee has not reported out its bill on the budget, it seems doubtful that they will increase the proposed budget request. The corresponding Senate Committee will begin hearings on May 20, 1975, with outside witnesses, to include the transit industry, providing testimony about the third week in June. This Senate Committee may propose increased dollars to cover a fare free program; this is only speculation, though.

In view of this information, the District should press for increased UMTA budget appropriation to carry out the Title II fare free program. At a minimum, the District may wish to urge that the \$4.25 million now being requested in the FY 76 budget be used to begin addressing a fare free type program. However, at this point, it is not anticipated that funds will be available for FY 1976.

- (1) the effects of such systems on (i) vehicle traffic and attendant air pollution, congestion, and noise, (ii) the mobility of urban residents, and (iii) the economic viability of central city business;
- (2) the mode of mass transportation that can best meet the desired objectives;
- (3) the extent to which frivolous ridership increases as a result of reduced fare or fare-free systems;
- (4) the extent to which the need for urban highways might be reduced as a result of reduced fare or fare-free systems; and
- (5) the best means of financing reduced fare or fare-free transportation on a continuing basis.

SEC. 205. The Secretary shall make annual reports to the Congress on the information gathered pursuant to section 204 of this title and shall make a final report of his findings, including any recommendations he might have to implement such findings, not later than June 30, 1975.

SEC. 206. In carrying out the provisions of this title, the Secretary shall provide advisory participation by interested State and local government authorities, mass transportation systems management personnel, employee representatives, mass transportation riders, and any other persons that he may deem necessary or appropriate.

SEC. 207. There are hereby authorized to be appropriated not to exceed \$20,000,000 for each of the fiscal years ending on June 30, 1975, and June 30, 1976, respectively, to carry out the provisions of this title.

* * * * *

TITLE II—FARE-FREE MASS TRANSPORTATION

Demonstrations

SEC. 201. The Secretary of Transportation (hereinafter referred to as the "Secretary") shall enter into such contracts or other arrangements as may be necessary for research and the development, establishment, and operation of demonstration projects to determine the feasibility of fare free urban mass transportation systems.

SEC. 202. Federal grants or payments for the purpose of assisting such projects shall cover not to exceed 80 per centum of the cost of the project involved, including operating costs and the amortization of capital costs for any fiscal year for which such contract or other arrangement is in effect.

SEC. 203. The Secretary shall select cities or metropolitan areas for such projects in accordance with the following:

- (1) to the extent practicable, such cities or metropolitan areas shall have a failing or nonexistent or marginally profitable transit system, a decaying central city, automobile-caused air pollution problems, and an immobile central city population;
- (2) several projects should be selected from cities or metropolitan areas of differing sizes and populations;
- (3) a high level of innovative service must be provided including the provision of crosstown and other transportation service to the extent necessary for central city residents and others to reach employment, shopping, and recreation; and
- (4) to the extent practicable, projects utilizing different modes of mass transportation shall be approved.

SEC. 204. The Secretary shall study fare-free systems assisted pursuant to this title, and other financially urban mass transportation systems providing reduced fares for the purpose of determining the following:

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

LOCAL FUNDING REQUIREMENT

Apart from the many questions involving federal demonstration grants, local participation is an essential part of such an experiment. The City of Seattle is operating a fare free zone only because the city agreed to subsidize such an experiment. Whatever the local costs involved in implementing such a program in any center of the country, the local government must assume the responsibility to maintain equity. As the District does not have sufficient funds for free transportation, and may not have available sources to even maintain our 25¢ flat fare program, it may be inconsistent to approach such an alternative while simultaneously investigating various fare increases to maintain present service levels.

The basic intent of the federal demonstration program is to test alternatives of transit; without some assurance that if the program is successful, and funds are available locally to maintain it, the primary is lost.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

OTHER ALTERNATIVES TO ACHIEVE OBJECTIVES

Either in conjunction with a fare free experiment or performed independently, the objections mentioned in Section II can be achieved by several alternatives, all of which would improve congestion.

- 1) Special lanes for buses, "transit streets."
- 2) Preferential treatment of high occupancy vehicles.
- 3) Limit on-street stopping and parking along major arterials, strengthen enforcement and increase tow-away zones.
- 4) Limit or prohibit left turn movements on major streets that do not have special turning lanes.
- 5) Abolish "free" parking privileges for all civil employees.

Each alternative would further improve downtown mobility by discouraging use of autos. Concurrently, bus travel would appear more attractive because of faster speeds made possible by priorities on the downtown streets. Even if a fare free experiment were implemented, if the city continues to cater to passenger vehicles by allowing them equal treatment on congested streets, an overabundance of space to park, and encouraging their use by providing free or reduced parking, it is doubtful that free buses will receive a positive response from the public.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

CONCLUSION

With the methods and formulas devised by staff, it becomes apparent that a fare free experiment can actually be implemented in the downtown area. Albeit not for additional cost, staff has shown provision for additional vehicles for (1) maintaining present line frequencies and (2) providing for additional seats where necessary. Although time did not permit a thorough study of all potential areas, nor a twenty-four hour program, our formulas could be expanded and applied to supplemental data for the next meeting.

Based upon the projections, staff estimates a total cost of between three and four million dollars for FY 76 for weekdays between 9:00 AM and 3:00 PM. Additional vehicles for this period alone range between 75 and 85 which could be assigned from peak requirements. Further extension of hours into the peak and on weekends would require additional coaches, not presently available in the fleet, and more new manpower.

A comparison of the projected cost with the basic objectives outlined previously will allow us to evaluate the proposal. A fare free zone in the CBD will definitely induce intra-CBD travel and stimulate retail sales. Although a potential exists to encourage peripheral parking, we cannot attest to the available parking that is not being used at this time. Traffic congestion will be reduced if a substantial percentage of vehicular travel is local in nature. If travel is limited to entering and leaving the zone and people continue to use parking near work location, congestion will not be lessened.

From the standpoint of the present transit rider, a fare free experiment could be detrimental. Regular users of the monthly pass program have "fare free" rides in any area of the County, at any time, for short trips in addition to their commutes.

Delay of through riders by zone checks and induced rides within the fare free area could be up to fifteen minutes. Rather than serve as an attraction, these delays would be a detriment by increasing the travel time. The premise that seats are available on buses in abundance has been disproven with accurate data on a line by line basis. Without additional vehicles in service, overloading will result -- and through riders will suffer.

Four alternate procedures were presented in controlling a fare free zone. Only the "honor system" guarantees no abuse to the bus operators. The others which are practiced elsewhere in the United States, are subject to disputes and delays which are not making bus travel enjoyable for the other passengers.

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

The question still remains regarding funding. UMTA has indicated that demonstration programs are planned but not budgeted. The projected annual costs of the Los Angeles experiment for the base period virtually consume all planned federal allocations for a national program. A guarantee for the 20% local matching funds must be found as well. Assurance from the City of Los Angeles would also be instrumental so that if the demonstration were successful, the funds would be available to continue the program. Because of the scope and size of the District's service area, it would be out of the question to assume a fare free zone in one sector while charging fares on another, and assuming all costs.

Figure 3

PEAKING FACTORS OF MAJOR LOCAL
LINES

Hourly Period	Passengers	Base Ratio
6-7	21,155	
7-8	43,715	
8-9	22,911	
9-10	12,652	0.91
10-11	12,612	0.90
11-12	13,112	0.94
12-1	14,156	1.01
1-2	14,282	1.02
2-3	17,062	1.22
3-4	21,864	
4-5	41,122	
5-6	35,621	
6-7	17,285	
7-8	6,961	
8-9	3,839	
9-10	3,056	
11-11	2,367	

$\frac{83,876}{6} = 13,980$

Source: RTD Cordon Count; May, 1974

A FARE FREE EXPERIMENT FOR DOWNTOWN LOS ANGELES
PRELIMINARY REPORT

APPENDIX

REVIEW OF FARE FREE SYSTEMS IN OTHER CITIES

Few other cities in the country offer free fare zones in their downtown area. Among the handful that do, most use the same approach in the actual operation of the program. Cities with fare free programs have indicated varying degrees of success, with Seattle perhaps expressing the greatest enthusiasm for their "Magic Carpet" program. Due to the many differences in surface routings, the layout of the central business district and peak hour load factors, it is difficult to forecast the success of such a program in Los Angeles. Nevertheless, a brief review of these other programs is presented here to give a better understanding of what is involved.

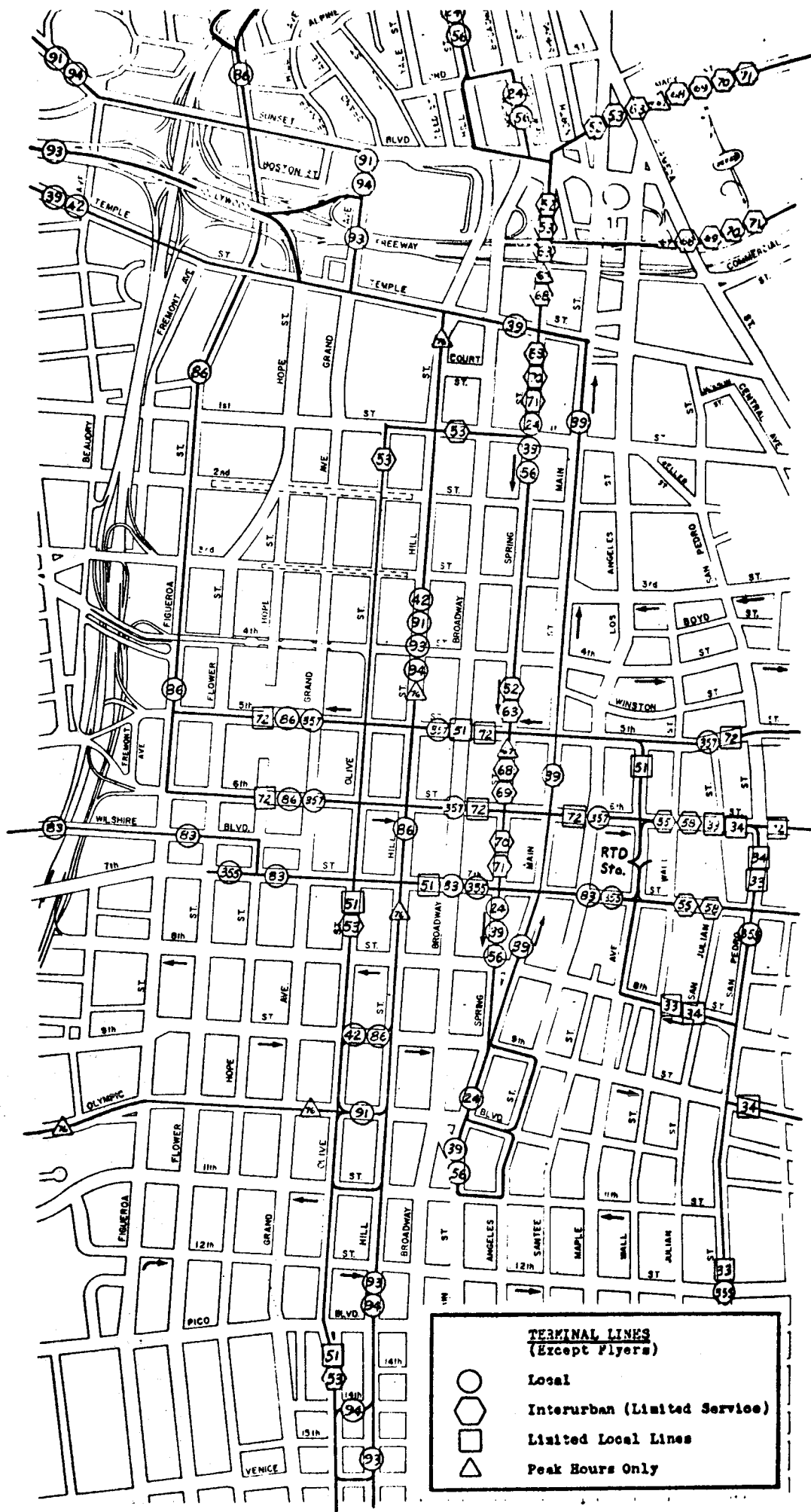
● Seattle

Seattle's "Magic Carpet" service was instituted in September, 1973. Loading at stops is through both doors. Passengers exit through the front door and pay while boarding on inbound trips and upon leaving on outbound trips. Those who ride within the 105 square block CBD, or the "Magic Carpet" zone, ride free, while those who are going beyond the fare free zone must get a transfer or ticket which is collected upon leaving the bus. In order to compensate the Seattle Metro for revenue lost from a 10¢ shuttle operation in effect prior to the "Magic Carpet" program, the City agreed to pay \$145,000 a year. Results of a study conducted in July, 1974, indicated the downtown ridership more than doubled in one year. An estimated 2,500 daily car trips in downtown were eliminated by the fare free service. Additionally, it was estimated that a one percent increase in the total downtown sales of goods and services was due to the fare free service.

On the negative side, Metro reported a higher vandalism rate and some problems caused by people riding the buses without paying their fare.

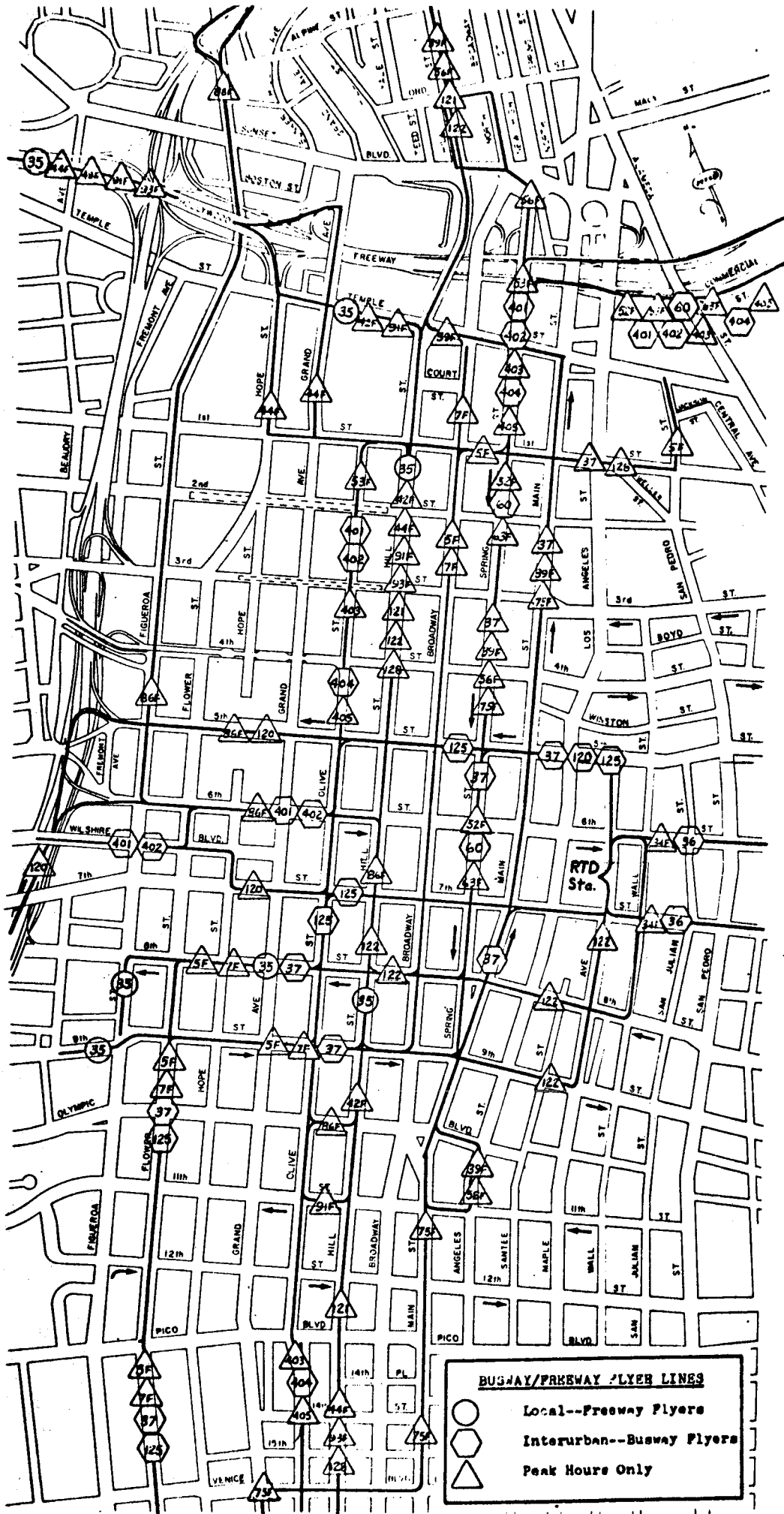
● Other Cities

Dayton Ohio, Chattanooga Tennessee and Duluth Minnesota all have instituted a DASH program (Downtown Area Short Hop). All three of these areas have a CBD of less than two square miles and all have radial route structuring. Passengers boarding within the DASH area identify themselves as "Dashers" with large cards (7"X12" or 4"X11"). Regular passengers pay on boarding. "Dashers" exit through the front door and return the card to the operator. It is thought that the system has increased ridership without any additional equipment being needed.



**TERMINAL LINES
(Except Flyers)**

- Local
- ⬡ Interurban (Limited Service)
- Limited Local Lines
- △ Peak Hours Only



BUSWAY/FREWAY FLYER LINES

Local--Freeway Flyers
 Interurban--Busway Flyers
 Peak Hour Only

