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**RECOMMENDED
TRANSIT IMPROVEMENT PLAN
FOR THE
LOS ANGELES MID-CITIES AREA**

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**SHORT RANGE
TRANSIT IMPROVEMENT
PROGRAM**

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CENTS

**TRANSIT OPERATIONS & PLANNING DIVISION
in conjunction with**

SCRTD

PLANNING & OPERATIONS STAFFS

ABOUT THE WORK...

SCRTD
1975
-R42
suppl.
c.2

This plan was prepared by the staff of CENTS' Transit Operations and Planning Division in close association with the senior SCRTD planning staff headed by Mr. Howard Beardsley. Unlike most such efforts, where the work is presented through a report after its completion, the CENTS staff met daily with their SCRTD counterparts. As concepts for changing routes and ideas for improving service emerged, the experience and policy perceptions of the SCRTD staff were brought to bear on these concepts. Consequently, this summary report, and the more detailed report on which it is based, are an anticlimax. Before either report was prepared, the SCRTD planning and operational staffs that worked with CENTS knew as much about the plan and each step of its formulation as did the CENTS staff.

The process of evaluating the existing transit services and formulating route and service changes included 24 separate meetings between the CENTS staff and planning agency officials from each of the 12 cities in the study area. Each of these meetings was attended by a member of the SCRTD staff. The first meeting was designed to acquaint city officials with the purpose for the project, to assure them that they would have an opportunity to react to any transit changes affecting their cities before these were codified, and to obtain from them information on travel patterns and transportation requirements as they and the communities that they represented perceive them. At the second meeting the principal concepts of the plan were presented along with alternative ideas for improving service. The reactions and suggestions from this second meeting are reflected in the transit improvement plan.

Besides the information and data supplied by the cities and operators of the major shopping centers, the evaluation of existing services used passenger check data and schedules supplied by SCRTD and demographic and travel data from the 1970 U.S. Census.

SCRTD TRANSIT IMPROVEMENT PROGRAM...

The plan for improving transit services in the Mid-Cities area is part of a comprehensive Short Range Transit Improvement Program that SCRTD initiated recently to evaluate and elevate the quality and effectiveness of its bus services in the entire Los Angeles Metropolitan area. The program is designed to bring existing SCRTD service into conformance with existing and emerging travel patterns.

Certain areas in the Los Angeles Basin have experienced intense development and population growth that has produced radical changes in the travel behavior in those areas. The divergence between transit services and mobility requirements in local areas have become more pronounced since the elimination of fare zones.

This report summarizes the work that was undertaken to evaluate the transit services in one such area - Mid-Cities - and to develop an operational plan for improving such service. The desired plan had to be sufficiently detailed to be implemented without further analysis.

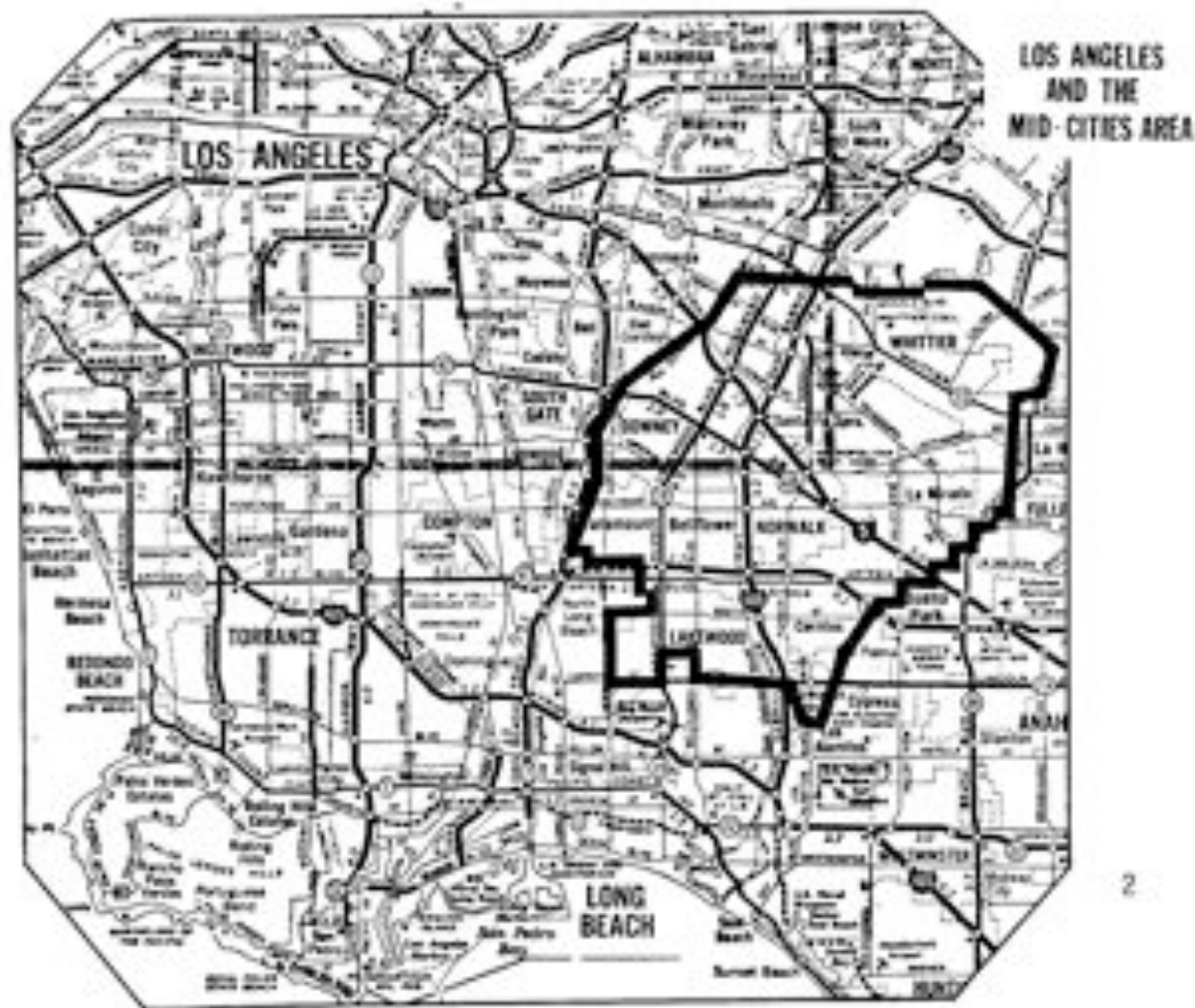
GEOGRAPHY AND PEOPLE OF THE MID-CITIES AREA...

The Mid-Cities area covers 105 square miles of southeast Los Angeles County and houses a population of over 625,000. The population has grown from 520,000 to 588,000 between 1960 and 1970, an increase of 13 percent. Between 1970 and 1974, it is estimated that the area's population has increased by 6.5 percent. In contrast, the population of the Los Angeles Basin has *declined* by 2 percent over the same period.

The topography of much of the study area is flat, the only exceptions being the Puente Hills area in Whittier, and the Los Coyotes Hills in La Mirada. The relative absence of other topographic obstacles (the Los Angeles and San Gabriel Rivers do not present a major obstacle to travel) has helped to produce a net-

work of arterial streets that have facilitated movement within the area. North of Imperial Highway the inclination of the road grid is along a southeast-northwest axis. This pattern is determined by the hills to the northeast and by the railroad right-of-way. Major roads that follow this inclination are, from north to south: Whittier Boulevard, Washington Boulevard; Telegraph Road, Firestone Boulevard, and the Santa Ana Freeway.

From Imperial Highway South, the area exhibits a more or less conventional square grid pattern aligned along a north-south axis. Major east-west arterials south of Imperial are: Rosecrans Avenue, Alondra Boulevard, Artesia Boulevard, South Street, Del Amo Boulevard, and Carson Street.



There are several major arteries that traverse the entire study area in the north-south direction. Where the two grid patterns meet, the orientation changes for streets such as Paramount Boulevard, Lakewood-Rosemead Boulevards, Bellflower Boulevard, Studebaker Road, Pioneer Boulevard, Norwalk Boulevard, Carmenita Road and Valley View Avenue.

New residential construction within the last 10 years and the street pattern have contributed to the development of large shopping plazas and commercial corridors. The principal shopping plazas include the Quad and Whittwood in Whittier; Stonewood in Downey; La Mirada Center in La Mirada; Norwalk Square in Norwalk; Los Cerritos Center in Cerritos; and Lakewood Center in Lakewood. These centers provide not only shopping for area residents, but employment as well.

The population of the Mid-Cities area is predominantly middle class. The average annual household incomes are distributed over a relatively narrow range with 80 percent of the area's population having incomes between \$10,000 and \$15,000 per year. Within this range, the various income groups are distributed throughout the area, although the western half tends toward the lower end of the income range while those in the eastern sections of the area, i.e. La Mirada and eastern Whittier, are more affluent.^{1/}

The poor, the elderly and the young that traditionally represent the transit dependent group are a small minority of the Mid-Cities area population. With few exceptions, the elderly represent less than 10 percent of the population in most Mid-Cities' census tracts. There are

concentrations of elderly in Downey, Whittier, Santa Fe Springs and Bellflower but these are generally below 20 percent of the population in those census tracts. The population below the poverty level is generally below 7 percent of the total population. Only a few pockets of poverty exist in a few of the census tracts in Artesia, Paramount/Downey, Pico Rivera, Hawaiian Gardens and Norwalk.

Unlike many areas of Southern California where the low income population is largely of Spanish descent and is concentrated in a geographic area, the Spanish speaking population in the Mid-Cities area is generally small and widely dispersed throughout the area. The only important exceptions are Pico Rivera and a section of Santa Fe Springs.

In most suburban areas, transit usage varies inversely with auto ownership. Auto ownership for the Mid-Cities study area is high, being above 1.6 autos per household. Where auto ownership is low, it correlates with low income. There is very little correlation between transit use for work trips and auto ownership. Where transit usage is above average for the area, auto availability tends to be low. However, there are a sufficient number of exceptions, e.g. census tracts in La Mirada and Bellflower, to discourage a convenient generalization.

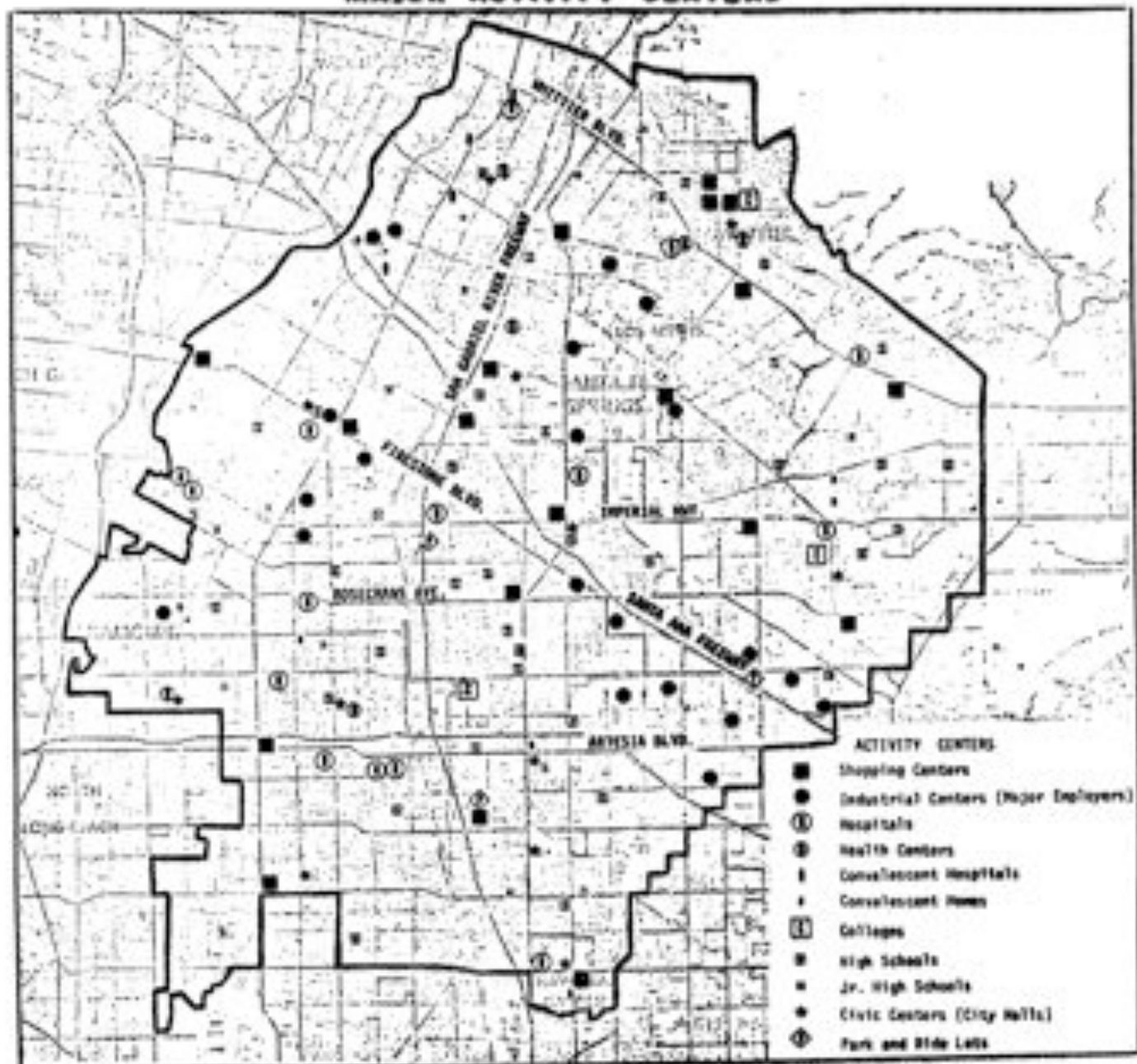
The uniformity of income and their distribution throughout the area accounts, to some extent, for the diffusion of travel patterns in the area. The Los Angeles CBD is a work trip destination for only 1 to 7 percent of all work trips. In many census tracts the percentage is below 1 percent.

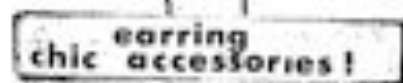
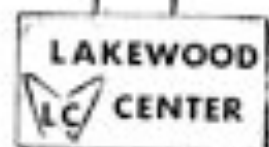
^{1/} Based on 1970 U.S. Census

Planning officials in the 12 cities believe that the comparatively recent commercial and industrial growth of the area has resulted in more travel to destinations within

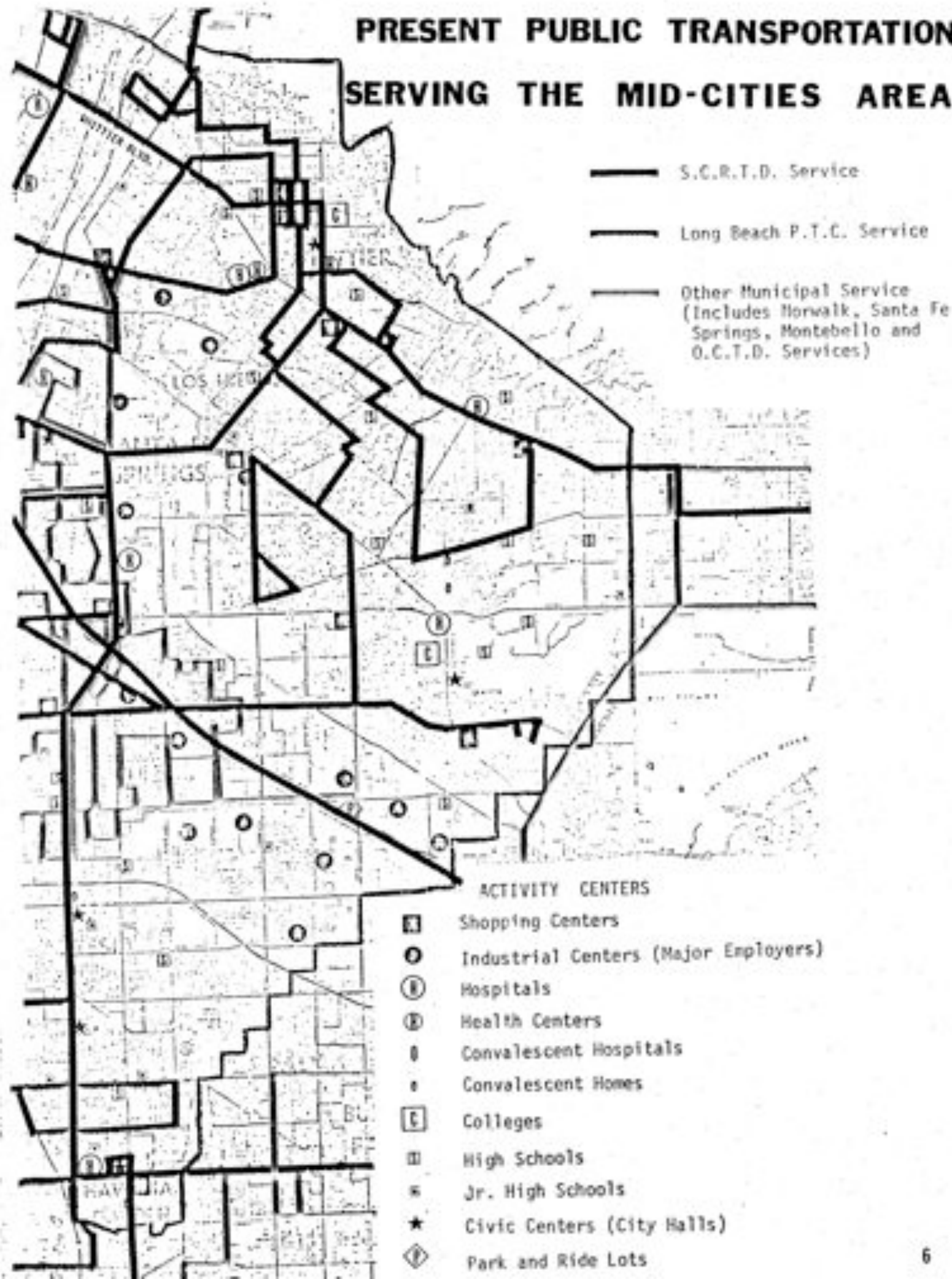
the area. Regardless of the destination, however, transit use is low. In only a few census tracts are more than 2 percent of the work trips made by public transportation.

MID-CITIES MAJOR ACTIVITY CENTERS





PRESENT PUBLIC TRANSPORTATION SERVING THE MID-CITIES AREA



EXISTING TRANSIT SERVICES...

Transit services are provided to the Mid-Cities area by RTD, which connects the 12 cities with the region; Long Beach Public Transportation Company, which connects Long Beach with Lakewood, Bellflower and Paramount; the Norwalk Transit System, which operates within that city; the Santa Fe Springs Public Transit System, which serves residents of that city; and the Montebello Transit System, which provides service in Pico Rivera and Whittier. The City of La Mirada operates a Dial-A-Bus System that serves the entire city.

TRANSIT SYSTEMS HEADWAYS

BUS LINES	SEATING IN SEATING			
	SEATING	SEATING	SEATING	SEATING
101 L.A. Express-Farmers-Bellflower	25	25	25	25
102 Long Beach-Walton-El Monte	25	25	25	25
103 E. Florence Ave./Orange Ave	25	25	25	25
104 Santa Ana Express-Orange Ave	25	25	25	25
105 L.A. Express-Orange Ave	25	25	25	25
106 Los Angeles-Santa Ana	25	25	25	25
107 L.A. Express-Fullerton	25	25	25	25
108 Newport-Bell	25	25	25	25
109 Bellflower-Woodbridge Park	25	25	25	25
110 Woodbridge-Woodbridge Park	25	25	25	25
111 Long Beach-El Monte	25	25	25	25
112 Orange-Farmers-Bellflower	25	25	25	25
113 L.A. Express-La Brea	25	25	25	25
114 Woodbridge-Woodbridge Park	25	25	25	25
115 L.A. Express-Fullerton-Bellflower	25	25	25	25
116 Woodbridge-Woodbridge Park	25	25	25	25
117 Woodbridge-Woodbridge Park	25	25	25	25
118 Woodbridge-Woodbridge Park	25	25	25	25
119 Woodbridge-Woodbridge Park	25	25	25	25
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199 Woodbridge-Woodbridge Park	25	25	25	25
200 Woodbridge-Woodbridge Park	25	25	25	25

*TENTATIVE DATES: Charges start/stop not controlling of this study year.

TRAVEL TIMES BY PRESENT TRANSIT SYSTEM

[illegible]

Answers are from *Crash* unless otherwise noted.

All other images are to appear at the bottom of the page within the 100 mm wide margin.

RTD operates 16 lines that traverse the area. From the point of view of the current users of the RTD transit services, the system offers impractically long travel times, and infrequent service. By way of illustration, travel times between the city halls of the 12 cities exceeds 60 minutes in 76 percent of the cases. In 24 percent, the travel is over two hours in duration, reducing the effective speed to that of walking.

Infrequent service, measured by the headways between buses, is, to a large extent, responsible for the long trip times. Even during the peak morning and evening hours, headways of 60 minutes and over prevail on half or more of the RTD lines operating in the study area. Three of the lines operate at either 2 or 4 hour headways during the peak hours.

For the same reasons, those in the community who would otherwise use public transit are turned from it by the prevailing service levels. Potential users face not only excessive travel times, but they are unable to reach certain, much frequented, destinations. Cerritos College cannot be reached by Long Beach residents traveling on LBPTC bus lines directly, even though a significant number of them use it.

Interconnections between LBPTC and SCRTD lines are often absent where they are most needed. In several cases, the lines from the two companies come within a few blocks of each other, discouraging transfers between lines. On several routes the two companies compete, providing superfluous service and depriving the community of service in areas where it is needed.

The productivity of the service that SCRTD provides in the Mid-Cities area is far below the average for the rest of its system. The lines that

serve the Mid-Cities area operate at only 1.04 passengers per bus mile compared to an average of 3.40 passengers per bus mile for the system. The average load factor on SCRTD buses in the Mid-Cities area is well below 0.5.

There are other parameters that measure efficiency with which resources (labor, vehicles) are applied in revenue service. One such measure, the ratio of layover time to operating hours, is indicative of scheduling and routing efficiency. The current system averages 23 percent of the operating hours in layovers, with 5 lines averaging over 30 percent. Operating speed is another measure of efficiency for the operator. For a given level of demand, the higher the operating speed, the higher the efficiency with which vehicles and drivers are used in revenue service. The average speed of bus services is 17.0 miles per hour, which is above average.

REQUIRED TRANSIT IMPROVEMENTS...

The existing deficiencies crystallize into the following requirements for improving service:

1. Routes must be restructured to facilitate travel within the area.
2. Service on the new routes must be elevated above that of the current system. Headways should be kept at 60 minutes or less, and travel times should, where possible, be at least halved.



RECOMMENDED TRANSIT SYSTEM...

The recommended SCRTD system consists of 16 lines. Because the lines are new, each has a prefix C. The lines are routed to facilitate movements between principal activity centers within the Mid-Cities area and to provide direct and frequent service from selected points in the Mid-Cities area to known principal destinations in other parts of the region.

The structure of the recommended system consists of six lines: C-1, C-4, C-6, C-9, C-11 and C-14, that form the skeleton of the new routes. An additional ten lines serve as tributaries to the six skeletal lines. The skeletal lines are routed largely along principal thoroughfares in the area in order to interconnect principal destinations in the Mid-Cities area and to facilitate interregional travel. The spine of the skeletal

network is the C-1 line which would operate along the Santa Ana Freeway. This freeway is the principal high-speed arterial to the Los Angeles CBD and to such major activity centers in Orange County as Disneyland, Knotts Berry Farm, and major employment centers. Since it virtually bisects the Mid-Cities area diagonally, it is easily accessible from all parts of the area.

The C-1 line is designed to receive passengers collected by other lines from all parts of the Mid-Cities area and it would serve to bring people from other parts of the region into the Mid-Cities area. The C-1 line would operate on the freeway, leaving it at selected interchanges within the Mid-Cities area to discharge or acquire passengers from other lines.



PROPOSED SKELETAL RTO LINES

The ten tributary RTD lines that interconnect the 12 cities comprising the Mid-Cities study area have been routed through the principal residential sections and connect them with the principal activity centers. Lines C-5, C-10, C-13 and C-16 are designed to facilitate circulation within the Mid-Cities area. The remaining tributary lines are designed to connect with the 6 skeletal lines and in some cases, to facilitate travel between the Mid-Cities area and the region.

An important consideration in designing the routes for the proposed 16 RTD lines was that of taking full advantage of the municipal bus operations that are already in existence. The level of service offered by these systems would be uneconomical for RTD to duplicate. Furthermore, duplicating the services would be detrimental to both RTD and the municipal operators and would not serve the public. The 16 proposed RTD lines provide new and more effective interchanges with the existing municipal lines.

In harmonizing the services of the RTD lines and those of the existing municipal lines, the concept paid particular attention to the predominant movement patterns. In cases where such movements could be best streamlined by avoiding a transfer between an RTD and municipal line, and extending one or another line to serve a destination, this course was followed.

The routing of the 16 proposed RTD lines and the level of service proposed for them was also governed by the desire to offer frequent transfer opportunities while minimizing the delays that attend them. The resultant transit network forms a systematic grid that offers the user fairly uniform travel times for equal distances regardless of origin, destination, or travel direction.

In arriving at levels of service, the availability of resources, e.g. buses, drivers, and support facilities, had to be considered. Accordingly, three service level alternatives were conceived. The *Base Level Service* operates buses at headways that result in approximately the same number of buses and drivers being required as now serve the Mid-Cities area. What is considered a Base Level Service headway for one line can, of course, differ from that of another line. The headways of a line during the peak, base, and night hours are governed by either demand for service or, when demand is very light, by a policy decision. Since demand for the foreseeable future is going to remain light, the maximum policy headway was chosen as 60 minutes. Certain lines, because of actual or potential patronage, or because of the types of people and destinations that they serve, require more frequent headways.

The next higher proposed service level is *Developmental Level A*. This level decreases the headways on the entire system to 30 minutes throughout the day, and provides for at least 60 minute headways throughout evening operation on most routes. Service *Developmental Level B* is an extension of the service offered at Developmental Level A, adding to the latter ad-

TRANSFER POSSIBILITIES PROPOSED RTD SYSTEM

Line	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01	*															
02	*	*														
03	*	*	*													
04	*	*	*	*												
05	*	*	*	*	*											
06	*	*	*	*	*	*										
07	*	*	*	*	*	*	*									
08	*	*	*	*	*	*	*	*								
09	*	*	*	*	*	*	*	*	*							
10	*	*	*	*	*	*	*	*	*	*						
11	*	*	*	*	*	*	*	*	*	*	*					
12	*	*	*	*	*	*	*	*	*	*	*	*				
13	*	*	*	*	*	*	*	*	*	*	*	*	*			
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

THE ELLIOTTS

CHURCH

TH GATE

NORTH
LONG

IMPERIAL INTL.

ROSEBANK AVE.

ANTWERP BLVD.

LAKE AND FRONT

FAIRBANK BLVD.

RIVER FRONT

SAN CARLOS INTL.

COMPLETE PROPOSED TRANSIT SYSTEM FOR THE MID-CITIES AREA- BASIC SERVICE LEVEL



- Proposed SCRTD System
- Long Beach PTC Service
- Proposed Long Beach Extensions
- SCRTD Route Abandonments
- Other Municipal Services
(Includes Norwalk, Montebello, Santa Fe Springs and OCTD)

- ACTIVITY CENTERS
- Shopping Centers
 - Industrial Centers (Major Employers)
 - ⑧ Hospitals
 - ⑨ Health Centers
 - Convalescent Hospitals
 - Convalescent Homes
 - ⓔ Colleges
 - ⓗ High Schools
 - ⓙ Jr. High Schools
 - ★ Civic Centers (City Halls)
 - Ⓟ Park and Ride Lots

ditional tributary lines in selected areas. These are routed so as to approach a uniform level of accessibility to bus service in the more densely populated sections of the Mid-Cities area.

The routes that comprise Developmental Level B have not been specified to the level of detail as those of the two other service levels. The additional routes are B-1, Downtown Whittier to Cerritos Center; B-2, Lakewood Center to Stonewood Center; B-3, South Los Angeles to Rio Hondo College; B-4, South Gate to Whittwood Shopping Center.

An important consideration in designing service in the Mid-Cities area was simplicity of operation and use. Headways and routes are kept as uniform as possible in order to simplify the amount of knowledge that users and potential users of the system would have to have in order to utilize it. Branching of lines, for example, has been avoided because they confuse patrons, especially occasional ones, and because they reduce service on each branch.

The 16 proposed RTD lines would supplant the service offered by the RTD Lines 38, 46, 54, 58, 72, 111, 112, 113, 116, 117, 118, 132, 136 and 137. Lines 34, 55 and 77 would continue but in an altered form. Lines 34 and 77 would be slightly rerouted and would operate on reduced headways. Line 55 would terminate at the Orange County Line. Its service would be interlined with the proposed C-9 line so that headways and operating costs would be minimized.

The recommended system is described by a map showing the new SCRTD service into Long Beach, and the extensions of the Long Beach Public Transportation Company system into the Mid-Cities area. The per-

formance of each line is described on a Line Summary Form which specifies running time by mileage segment, lay-over points, routing and transfer points. The Line Summary Form for Line C-5 illustrates the format of the information. The line parameters and the level of detail are sufficient for scheduling purposes. Service frequencies are presented for each service level alternative. The CENTS staff has traveled every segment of a recommended route to verify the feasibility of turning movements and the speeds and travel times included in the summaries.

SUMMARY OF LINE NO. C-5

From: Five Points		To: Lakewood Shopping Center		To: Long Beach & Long Beach Blvd.	
Westbound		Westbound		To Line No. 1 Location	
From Station:		From Station:		To Line No. 1 Location	
1. at Lakewood Avenue		1. at Lakewood Avenue		C-1 Lakewood & Santa Ana Ave.	
2. at Lakewood Ave.		2. at Lakewood Ave.		C-2 Lakewood & Artesia	
3. at Lakewood Ave.		3. at Lakewood Ave.		C-3 Beverly & Harbor	
4. at Lakewood Ave.		4. at Lakewood Ave.		C-4 Whittier & Harbor at Whittier	
5. at Lakewood Ave.		5. at Lakewood Ave.		C-5 Lakewood & Long	
6. at Lakewood Ave.		6. at Lakewood Ave.		C-6 Lakewood & Long	
7. at Lakewood Ave.		7. at Lakewood Ave.		C-7 Lakewood & Long	
8. at Lakewood Ave.		8. at Lakewood Ave.		C-8 Lakewood & Long	
9. at Lakewood Ave.		9. at Lakewood Ave.		C-9 Lakewood & Long	
10. at Lakewood Ave.		10. at Lakewood Ave.		C-10 Lakewood & Long	
11. at Lakewood Ave.		11. at Lakewood Ave.		C-11 Lakewood & Long	
12. at Lakewood Ave.		12. at Lakewood Ave.		C-12 Lakewood & Long	
13. at Lakewood Ave.		13. at Lakewood Ave.		C-13 Lakewood & Long	
14. at Lakewood Ave.		14. at Lakewood Ave.		C-14 Lakewood & Long	
15. at Lakewood Ave.		15. at Lakewood Ave.		C-15 Lakewood & Long	
16. at Lakewood Ave.		16. at Lakewood Ave.		C-16 Lakewood & Long	
17. at Lakewood Ave.		17. at Lakewood Ave.		C-17 Lakewood & Long	
18. at Lakewood Ave.		18. at Lakewood Ave.		C-18 Lakewood & Long	
19. at Lakewood Ave.		19. at Lakewood Ave.		C-19 Lakewood & Long	
20. at Lakewood Ave.		20. at Lakewood Ave.		C-20 Lakewood & Long	
21. at Lakewood Ave.		21. at Lakewood Ave.		C-21 Lakewood & Long	
22. at Lakewood Ave.		22. at Lakewood Ave.		C-22 Lakewood & Long	
23. at Lakewood Ave.		23. at Lakewood Ave.		C-23 Lakewood & Long	
24. at Lakewood Ave.		24. at Lakewood Ave.		C-24 Lakewood & Long	
25. at Lakewood Ave.		25. at Lakewood Ave.		C-25 Lakewood & Long	
26. at Lakewood Ave.		26. at Lakewood Ave.		C-26 Lakewood & Long	
27. at Lakewood Ave.		27. at Lakewood Ave.		C-27 Lakewood & Long	
28. at Lakewood Ave.		28. at Lakewood Ave.		C-28 Lakewood & Long	
29. at Lakewood Ave.		29. at Lakewood Ave.		C-29 Lakewood & Long	
30. at Lakewood Ave.		30. at Lakewood Ave.		C-30 Lakewood & Long	
31. at Lakewood Ave.		31. at Lakewood Ave.		C-31 Lakewood & Long	
32. at Lakewood Ave.		32. at Lakewood Ave.		C-32 Lakewood & Long	
33. at Lakewood Ave.		33. at Lakewood Ave.		C-33 Lakewood & Long	
34. at Lakewood Ave.		34. at Lakewood Ave.		C-34 Lakewood & Long	
35. at Lakewood Ave.		35. at Lakewood Ave.		C-35 Lakewood & Long	
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38. at Lakewood Ave.		38. at Lakewood Ave.		C-38 Lakewood & Long	
39. at Lakewood Ave.		39. at Lakewood Ave.		C-39 Lakewood & Long	
40. at Lakewood Ave.		40. at Lakewood Ave.		C-40 Lakewood & Long	
41. at Lakewood Ave.		41. at Lakewood Ave.		C-41 Lakewood & Long	
42. at Lakewood Ave.		42. at Lakewood Ave.		C-42 Lakewood & Long	
43. at Lakewood Ave.		43. at Lakewood Ave.		C-43 Lakewood & Long	
44. at Lakewood Ave.		44. at Lakewood Ave.		C-44 Lakewood & Long	
45. at Lakewood Ave.		45. at Lakewood Ave.		C-45 Lakewood & Long	
46. at Lakewood Ave.		46. at Lakewood Ave.		C-46 Lakewood & Long	
47. at Lakewood Ave.		47. at Lakewood Ave.		C-47 Lakewood & Long	
48. at Lakewood Ave.		48. at Lakewood Ave.		C-48 Lakewood & Long	
49. at Lakewood Ave.		49. at Lakewood Ave.		C-49 Lakewood & Long	
50. at Lakewood Ave.		50. at Lakewood Ave.		C-50 Lakewood & Long	
51. at Lakewood Ave.		51. at Lakewood Ave.		C-51 Lakewood & Long	
52. at Lakewood Ave.		52. at Lakewood Ave.		C-52 Lakewood & Long	
53. at Lakewood Ave.		53. at Lakewood Ave.		C-53 Lakewood & Long	
54. at Lakewood Ave.		54. at Lakewood Ave.		C-54 Lakewood & Long	
55. at Lakewood Ave.		55. at Lakewood Ave.		C-55 Lakewood & Long	
56. at Lakewood Ave.		56. at Lakewood Ave.		C-56 Lakewood & Long	
57. at Lakewood Ave.		57. at Lakewood Ave.		C-57 Lakewood & Long	
58. at Lakewood Ave.		58. at Lakewood Ave.		C-58 Lakewood & Long	
59. at Lakewood Ave.		59. at Lakewood Ave.		C-59 Lakewood & Long	
60. at Lakewood Ave.		60. at Lakewood Ave.		C-60 Lakewood & Long	
61. at Lakewood Ave.		61. at Lakewood Ave.		C-61 Lakewood & Long	
62. at Lakewood Ave.		62. at Lakewood Ave.		C-62 Lakewood & Long	
63. at Lakewood Ave.		63. at Lakewood Ave.		C-63 Lakewood & Long	
64. at Lakewood Ave.		64. at Lakewood Ave.		C-64 Lakewood & Long	
65. at Lakewood Ave.		65. at Lakewood Ave.		C-65 Lakewood & Long	
66. at Lakewood Ave.		66. at Lakewood Ave.		C-66 Lakewood & Long	
67. at Lakewood Ave.		67. at Lakewood Ave.		C-67 Lakewood & Long	
68. at Lakewood Ave.		68. at Lakewood Ave.		C-68 Lakewood & Long	
69. at Lakewood Ave.		69. at Lakewood Ave.		C-69 Lakewood & Long	
70. at Lakewood Ave.		70. at Lakewood Ave.		C-70 Lakewood & Long	
71. at Lakewood Ave.		71. at Lakewood Ave.		C-71 Lakewood & Long	
72. at Lakewood Ave.		72. at Lakewood Ave.		C-72 Lakewood & Long	
73. at Lakewood Ave.		73. at Lakewood Ave.		C-73 Lakewood & Long	
74. at Lakewood Ave.		74. at Lakewood Ave.		C-74 Lakewood & Long	
75. at Lakewood Ave.		75. at Lakewood Ave.		C-75 Lakewood & Long	
76. at Lakewood Ave.		76. at Lakewood Ave.		C-76 Lakewood & Long	
77. at Lakewood Ave.		77. at Lakewood Ave.		C-77 Lakewood & Long	
78. at Lakewood Ave.		78. at Lakewood Ave.		C-78 Lakewood & Long	
79. at Lakewood Ave.		79. at Lakewood Ave.		C-79 Lakewood & Long	
80. at Lakewood Ave.		80. at Lakewood Ave.		C-80 Lakewood & Long	
81. at Lakewood Ave.		81. at Lakewood Ave.		C-81 Lakewood & Long	
82. at Lakewood Ave.		82. at Lakewood Ave.		C-82 Lakewood & Long	
83. at Lakewood Ave.		83. at Lakewood Ave.		C-83 Lakewood & Long	
84. at Lakewood Ave.		84. at Lakewood Ave.		C-84 Lakewood & Long	
85. at Lakewood Ave.		85. at Lakewood Ave.		C-85 Lakewood & Long	
86. at Lakewood Ave.		86. at Lakewood Ave.		C-86 Lakewood & Long	
87. at Lakewood Ave.		87. at Lakewood Ave.		C-87 Lakewood & Long	
88. at Lakewood Ave.		88. at Lakewood Ave.		C-88 Lakewood & Long	
89. at Lakewood Ave.		89. at Lakewood Ave.		C-89 Lakewood & Long	
90. at Lakewood Ave.		90. at Lakewood Ave.		C-90 Lakewood & Long	
91. at Lakewood Ave.		91. at Lakewood Ave.		C-91 Lakewood & Long	
92. at Lakewood Ave.		92. at Lakewood Ave.		C-92 Lakewood & Long	
93. at Lakewood Ave.		93. at Lakewood Ave.		C-93 Lakewood & Long	
94. at Lakewood Ave.		94. at Lakewood Ave.		C-94 Lakewood & Long	
95. at Lakewood Ave.		95. at Lakewood Ave.		C-95 Lakewood & Long	
96. at Lakewood Ave.		96. at Lakewood Ave.		C-96 Lakewood & Long	
97. at Lakewood Ave.		97. at Lakewood Ave.		C-97 Lakewood & Long	
98. at Lakewood Ave.		98. at Lakewood Ave.		C-98 Lakewood & Long	
99. at Lakewood Ave.		99. at Lakewood Ave.		C-99 Lakewood & Long	
100. at Lakewood Ave.		100. at Lakewood Ave.		C-100 Lakewood & Long	

EFFECTS OF THE RECOMMENDED CHANGES...

The proposed RTD lines and the changes proposed for the LBPTC and OCTD lines dramatically improve the service available to most transit patrons, offer access to new destinations for the residents and do so within the resource capabilities of RTD.

Current patrons of the RTD system in the Mid-Cities area could expect major reductions in headways. Even at the Base Service Level, no line would operate at more than 60 minute headways during the day and evening. This is in sharp contrast to existing service where, even during the peak hours, several lines operate at two hour headways. Of the new RTD lines, 65 percent would operate at peak hour headways of 30 minutes or less. By contrast, only 25 percent of the existing RTD lines operate at peak hour headways of 30 minutes or less. Improvements in base hour headways would be even more impressive. Among the current RTD lines, 31 percent operate base hour headways above 60 minutes, compared to none for the proposed system.

The number of cities that a passenger in a given city could reach would, at least, double for more than 80 percent of the Mid-Cities passengers. Using the earlier illustration of travel time between city halls, the new system would offer RTD patrons an average travel time reduction of 28 percent at the Base Level Service. This average masks the more important travel time reductions of over 50 percent for those destinations where current travel times approach or exceed 2 hours.

At the Base Level Service, 12 of the 66 origin-destination pairs would have trip times above those possible with the current RTD system. By operating Lines C-2, C-4, C-9 and

C-16 at Developmental Level A, these deficiencies would not only be eliminated by the trip times of these 12 origin-destination pairs, but would be reduced. Although the proposed routing does remove service from some patrons, the number is small. Based on work trips that are currently made by transit, it is expected that less than two percent of the trips would be displaced.

HEADWAY & SERVICE HOURS OF PROPOSED SYSTEM

PROPOSED ROUTE R.C.A. - P.M.A. AFTER	SERVICE HOURS	STATIONS IN SERVICE			
		MT Peak	Base	PM Peak	Evening
C-1 Santa Ana Freeway	5A-2A	15	30	15	40
C-2 Arroyo Boulevard	5A-2P	40	60	60	-
C-3 Clayton-Corfield	5A-2A	31	60	30	60
C-4 Carreras/Chilblain/Deverly	6A-2P	40	60	60	-
C-5 Passero-Paradise	6A-10P	31	60	30	60
C-6 Mortimer Boulevard	5A-2A	10	30	10	40
C-7 Gage-Fowley	5A-2A	40	60	40	60
C-8 Durgin/Cashington	6A-8P	40	60	60	-
C-9 Lakewood-Rosemead	6A-2A	15	60	15	40
C-10 Whitcomb-Bellflower	6A-2P	40	60	60	-
C-11 Studebaker	6A-2P	31	60	30	-
C-12 Superlat Highway	5A-2P	31	60	30	-
C-13 Pioneer Boulevard	6A-8P	30	60	30	-
C-14 Rosecrans Avenue	6A-10P	31	60	30	60
C-15 Finesse-Serwall	5A-2A	30	60	30	60
C-16 Alondra Boulevard	6A-2P	40	60	60	-
RTD 27 (Revised) Raymond-Bell	5A-2A	10	30	15	40

TRAVEL TIMES BY PROPOSED TRANSIT SYSTEM

TRAVEL TIMES OF FIRST-CLASS THROUGH SYSTEM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	TO DOWNTOWN	TO CITY HALL	TO CITY CENTER	TO CITY SQUARE	TO CITY MARKET	TO CITY PARK	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY 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CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP	TO CITY TOWN	TO CITY VILLAGE	TO CITY HAMLET	TO CITY COTTAGE	TO CITY FARM	TO CITY GARDEN	TO CITY LAKE	TO CITY BEACH	TO CITY MOUNTAIN	TO CITY RIVER	TO CITY HILL	TO CITY VALLEY	TO CITY PLAIN	TO CITY FOREST	TO CITY DESERT	TO CITY SWAMP

Transit users in the Mid-Cities area would derive new mobility from the proposed interconnections between RTD, LBPTC and OCTD lines. These interconnections would:

- give Lakewood residents direct access to Cerritos College and to major shopping centers in the Mid-Cities area.
- give Orange County and Mid-Cities residents better interchange between OCTD and RTD bus lines.

The proposed transit system would also improve interconnections between RTD lines serving the Mid-Cities area and those that serve the

rest of the region. Specifically:

- service on Line C-6 would improve access from other regions to the Whittier Shopping Center and the Whittier Boulevard Corridor.
- service on Lines C-2, C-12 and C-14 would, for the first time, provide effective and direct east-west service between the Mid-Cities area and the South Bay communities.
- service on Lines C-3, C-9, C-8 and C-15 would link the Mid-Cities area with dozens of RTD lines that traverse the South Central area.

SERVICE COMPARISON BY CITY

	PRESENT ROUTES*		RECOMMENDED SAGE-LEVEL SERVICE**		PERCENT CHANGE
	OPERATING MILES	MILES PER 1,000 Pop.	OPERATING MILES	MILES PER 1,000 Pop.	
Artesia	37.0	3.5	153.0	10.4	+134
Bellflower	471.0	9.2	516.4	10.0	+9
Cerritos	20.8	3.3	481.1	28.3	+1628
Danvers	1036.8	13.7	1229.6	13.9	+19
Harbison Gardens	51.1	4.9	77.6	7.5	+52
Lakewood	900.4	10.6	1377.6	16.6	+53
La Mirada	107.0	3.3	343.7	10.7	+321
L.A. County	207.4	4.7	242.0	5.5	+37
Morwalk	405.2	4.6	1053.0	11.9	+160
Paramount	340.0	9.8	553.2	15.4	+57
Pico Rivera	822.2	13.8	832.5	16.4	+4
Santa Fe Springs	172.4	12.9	456.6	34.2	+165
South Whittier	124.0	2.7	208.9	4.5	+68
Whittier	767.8	10.5	1268.4	17.4	+63
Total	5463.1	8.1	8713.6	13.4	+57

*includes service presently operated by RTD, LBPTC, and Montebello. Service operated by the local public transit systems of La Mirada, Morwalk and Santa Fe Springs is not included.

**Includes recommended service to be operated by RTD, LBPTC, OCTD and Montebello. Service operated by the local public transit systems of Morwalk, La Mirada and Santa Fe Springs is not included.

The increased bus miles offered by the proposed RTD system and the improvements in route distribution would increase both the amount of area and the population covered by transit service. It is reasonable to assume that such increased coverage would stimulate eventual increases in patronage. Using bus miles per 1000 population as a measure of the population being covered, the proposed system would increase the coverage by an average of 57 percent. Although the population coverage falls far below the desired 50 bus miles per 1000 population, the improvement for those 12 cities that are now among the most poorly covered is several hundred percent.



The proposed service offers improved access to the most frequented shopping plazas. Each of the six major shopping plazas would be served by no less than 3 transit lines compared to one or two lines operating at infrequent headways. One way of illustrating the improvements in mobility and accessibility offered by the proposed system is a comparison of the number of places that can be reached within a 60 minute travel time by the current and proposed systems.

Using as an example the travel between city halls of the 12 cities, the accompanying charts show that in most instances, a resident of a city would be able to reach more cities within 60 minutes via the proposed system than is currently the case. For example, from Hawaiian Gardens, 6 other cities could be reached within 60 minutes compared to 2 cities with the current system. In those cases where the number of cities that are accessible remained the same, the identity of the city changed. For example, the proposed system provides residents of La Mirada access to Whittier in a 60 minute period, replacing the less needed access to Artesia.



CITIES* ACCESSIBLE BY PUBLIC TRANSIT FROM A GIVEN CITY WITHIN A 60 MINUTE TRAVEL TIME



*CITY HALL TO CITY HALL

— BY PRESENT RTD SERVICE



***** BY PROPOSED RTD SERVICE (BASE LEVEL)

The effect of the proposed system on the resources of RTD can be shown by comparing the number of vehicles, bus miles, bus hours, and speed of the current and proposed systems. Operating at Base Level Service, only 9 additional vehicles would be needed. This represents a 10 percent increase in the current fleet. Daily bus miles would increase by only 2603. This represents an increase of 16 percent in the total number of bus miles for all lines (terminus-terminus).

Assuming no increase in the work passengers that travel the existing RTD system that serves the Mid-Cities area, productivity would decrease by that amount. Since the current patronage is disproportionately low compared to what RTD experiences elsewhere, it is reasonable to expect that patronage would increase.

The proposed system promises some increase in operating efficiency. One such measure, the ratio of layover time to operating time, would be reduced by an average of 5.4 percent.

A further improvement in headways, travel times and population coverage can be attained by operating lines C-1 and C-6 at Developmental Level A and restoring RTD line 55 in a revised form. This would increase the Mid-Cities bus fleet by another 8 buses and the daily bus miles by an additional 900.

Finally, the proposed Base Level Service could be expanded so that lines C-2, C-4, C-9, C-11 and C-16 are also operated at Developmental Level A and lines B-3 and B-4 are implemented. This expansion would require an additional 25 buses and 4807 bus miles.

COMPARISON OF EXISTING & PROPOSED RTD SYSTEMS

PRESENT ROUTE	OPERATING MILES	OPERATING HOURS	OPERATING LAYOVER HOURS	VEHICLES REQUIRED A.M. PEAK	VEHICLES REQUIRED P.M. PEAK	1 OF OPER HOURS IN LAYOVER	LINE SPEED	OPERATING MILES WITHIN STUDY AREA	OPERATING HOURS WITHIN STUDY AREA	1 OF OPER MILES IN STUDY AREA	1 OF OPER HOURS IN STUDY AREA
NO. 24	271.56	46.74	11.44	6	4	26.1	19.2	271.56	12.70	33.2	34.1
NO. 25	302.00	50.34	11.30	7	7	32.4	19.2	302.00	13.33	36.4	37.8
NO. 42	1,271.22	210.64	59.63	8	7	36.6	17.3	0	0	0	0
NO. 44	1,237.88	141.74	26.77	12	11	20.4	17.2	0	0	0	0
NO. 46	894.37	76.18	5.25	7	8	13.8	21.4	894.37	12.82	21.5	20.5
NO. 52	4,794.25	313.64	27.44	34	21	56.2	27.4	477.79	32.00	31.1	34.5
NO. 55	8,750.42	124.28	32.14	25	28	24.3	17.1	491.34	42.97	20.2	21.3
NO. 111	603.42	75.46	19.12	4	5	25.4	16.6	0	0	0	0
NO. 112	575.84	37.28	14.21	4	4	45.2	17.8	276.85	15.42	47.7	45.4
NO. 113	577.76	15.76	1.50	1	1	14.8	17.6	75.46	4.58	41.5	44.3
NO. 116	696.42	75.57	2.72	3	3	77.6	16.8	217.14	18.45	31.4	42.8
NO. 117	24.24	14.47	2.12	2	2	19.7	16.8	206.78	16.83	44.7	47.9
NO. 118	417.58	24.44	7.47	2	2	37.4	17.3	427.88	24.44	100.3	100.3
NO. 120	102.40	6.80	1.42	1	1	16.2	18.4	77.78	5.20	31.4	34.0
NO. 124	543.97	32.32	12.24	4	4	37.6	18.1	543.97	32.32	100.0	100.0
NO. 126	740.21	27.88	5.50	3	2	59.7	6.9	44.44	4.48	28.2	14.4
NO. 128	139.42	8.30	4.28	1	1	37.8	16.8	126.62	6.30	100.0	100.0
NO. 129	510.47	26.28	15.73	2	2	40.1	16.8	170.37	8.80	32.1	32.3
TOTAL	16,394.01	661.17	217.47	85	88	31.2	17.8	4718.74	246.42	28.2	29.4
PROPOSED ROUTES (Base Level)											
C-1 Santa Ana Freeway	1,007.40	133.43	40.38	12	14	26.1	14.1	1,007.40	35.24	27.7	27.7
C-2 Avenida Boulevard	548.00	36.82	12.27	3	3	33.3	14.9	548.00	13.44	36.3	36.3
C-3 Glendale-Garfield (H)	5,607.00	138.07	26.27	10	10	36.1	13.3	146.12	14.88	7.9	7.9
C-4 Greenway-Bellflower	517.50	27.21	6.70	3	3	38.8	12.9	471.50	31.51	100.0	100.0
C-5 Redondo-Beverly	421.54	57.54	15.87	4	4	26.6	12.8	421.54	32.54	100.0	100.0
C-6 Whittier Boulevard	2,614.15	143.74	14.20	24	27	7.8	12.4	956.86	61.62	25.1	25.1
C-7 Sepulveda	612.30	41.40	4.72	3	3	14.2	12.8	110.25	12.37	24.1	24.1
C-8 Olympic-Whittier	576.00	36.11	9.57	3	3	38.2	14.9	210.41	18.25	50.4	50.4
C-9 Culverwood-Beverly	807.10	28.82	14.14	2	2	59.5	11.3	747.50	41.98	82.7	82.7
C-10 Whittier-Bellflower	280.80	21.70	6.44	2	2	23.4	17.9	249.40	21.70	100.0	100.0
C-11 Buena Vista	427.41	33.33	7.42	4	4	27.3	13.1	427.41	33.33	100.0	100.0
C-12 Imperial Highway	570.30	41.41	4.87	4	4	6.6	17.3	570.30	39.51	41.3	41.3
C-13 Pioneer Boulevard	421.80	34.10	5.53	4	4	14.7	14.4	421.80	34.10	100.0	100.0
C-14 Redondo Beach	1,057.00	42.29	8.22	6	6	21.4	10.9	420.00	32.38	41.8	41.8
C-15 Flamingo-Beverly (H)	2,044.70	217.70	34.85	15	15	11.3	12.7	207.48	52.44	15.1	15.1
C-16 Alhambra Boulevard	395.00	24.78	8.30	2	2	39.3	12.5	288.00	24.78	100.0	100.0
RTD No. 27 (Overhaul)	313.70	46.44	17.40	5	5	26.2	12.5	0	0	0	0
TOTAL	18,512.30	1,286.11	329.48	112	116	32.8	14.6	7,372.18	321.58	28.8	40.2
DIFFERENCE	+2,118.29	+624.94	+111.99	+27	+28	+1.6	-3.2	+2,653.44	+75.16	+20.6	+10.8
ADDITIONAL ROUTES (Developmental)											
C-1 Santa Ana Freeway	1,007.40	133.43	40.38	12	14	26.1	14.1	1,007.40	35.24	27.7	27.7
C-2 Avenida Boulevard	548.00	36.82	12.27	3	3	33.3	14.9	548.00	13.44	36.3	36.3
C-3 Glendale-Garfield (H)	5,607.00	138.07	26.27	10	10	36.1	13.3	146.12	14.88	7.9	7.9
C-4 Greenway-Bellflower	517.50	27.21	6.70	3	3	38.8	12.9	471.50	31.51	100.0	100.0
C-5 Redondo-Beverly	421.54	57.54	15.87	4	4	26.6	12.8	421.54	32.54	100.0	100.0
C-6 Whittier Boulevard	2,614.15	143.74	14.20	24	27	7.8	12.4	956.86	61.62	25.1	25.1
C-7 Sepulveda	612.30	41.40	4.72	3	3	14.2	12.8	110.25	12.37	24.1	24.1
C-8 Olympic-Whittier	576.00	36.11	9.57	3	3	38.2	14.9	210.41	18.25	50.4	50.4
C-9 Culverwood-Beverly	807.10	28.82	14.14	2	2	59.5	11.3	747.50	41.98	82.7	82.7
C-10 Whittier-Bellflower	280.80	21.70	6.44	2	2	23.4	17.9	249.40	21.70	100.0	100.0
C-11 Buena Vista	427.41	33.33	7.42	4	4	27.3	13.1	427.41	33.33	100.0	100.0
C-12 Imperial Highway	570.30	41.41	4.87	4	4	6.6	17.3	570.30	39.51	41.3	41.3
C-13 Pioneer Boulevard	421.80	34.10	5.53	4	4	14.7	14.4	421.80	34.10	100.0	100.0
C-14 Redondo Beach	1,057.00	42.29	8.22	6	6	21.4	10.9	420.00	32.38	41.8	41.8
C-15 Flamingo-Beverly (H)	2,044.70	217.70	34.85	15	15	11.3	12.7	207.48	52.44	15.1	15.1
C-16 Alhambra Boulevard	395.00	24.78	8.30	2	2	39.3	12.5	288.00	24.78	100.0	100.0
RTD No. 27 (Overhaul)	313.70	46.44	17.40	5	5	26.2	12.5	0	0	0	0
TOTAL	18,512.30	1,286.11	329.48	112	116	32.8	14.6	7,372.18	321.58	28.8	40.2
DIFFERENCE	+2,118.29	+624.94	+111.99	+27	+28	+1.6	-3.2	+2,653.44	+75.16	+20.6	+10.8
ADDITIONAL ROUTES (Developmental)											
C-1 Santa Ana Freeway	1,007.40	133.43	40.38	12	14	26.1	14.1	1,007.40	35.24	27.7	27.7
C-2 Avenida Boulevard	548.00	36.82	12.27	3	3	33.3	14.9	548.00	13.44	36.3	36.3
C-3 Glendale-Garfield (H)	5,607.00	138.07	26.27	10	10	36.1	13.3	146.12	14.88	7.9	7.9
C-4 Greenway-Bellflower	517.50	27.21	6.70	3	3	38.8	12.9	471.50	31.51	100.0	100.0
C-5 Redondo-Beverly	421.54	57.54	15.87	4	4	26.6	12.8	421.54	32.54	100.0	100.0
C-6 Whittier Boulevard	2,614.15	143.74	14.20	24	27	7.8	12.4	956.86	61.62	25.1	25.1
C-7 Sepulveda	612.30	41.40	4.72	3	3	14.2	12.8	110.25	12.37	24.1	24.1
C-8 Olympic-Whittier	576.00	36.11	9.57	3	3	38.2	14.9	210.41	18.25	50.4	50.4
C-9 Culverwood-Beverly	807.10	28.82	14.14	2	2	59.5	11.3	747.50	41.98	82.7	82.7
C-10 Whittier-Bellflower	280.80	21.70	6.44	2	2	23.4	17.9	249.40	21.70	100.0	100.0
C-11 Buena Vista	427.41	33.33	7.42	4	4	27.3	13.1	427.41	33.33	100.0	100.0
C-12 Imperial Highway	570.30	41.41	4.87	4	4	6.6	17.3	570.30	39.51	41.3	41.3
C-13 Pioneer Boulevard	421.80	34.10	5.53	4	4	14.7	14.4	421.80	34.10	100.0	100.0
C-14 Redondo Beach	1,057.00	42.29	8.22	6	6	21.4	10.9	420.00	32.38	41.8	41.8
C-15 Flamingo-Beverly (H)	2,044.70	217.70	34.85	15	15	11.3	12.7	207.48	52.44	15.1	15.1
C-16 Alhambra Boulevard	395.00	24.78	8.30	2	2	39.3	12.5	288.00	24.78	100.0	100.0
RTD No. 27 (Overhaul)	313.70	46.44	17.40	5	5	26.2	12.5	0	0	0	0
TOTAL	18,512.30	1,286.11	329.48	112	116	32.8	14.6	7,372.18	321.58	28.8	40.2
DIFFERENCE	+2,118.29	+624.94	+111.99	+27	+28	+1.6	-3.2	+2,653.44	+75.16	+20.6	+10.8
ADDITIONAL ROUTES (Developmental)											
C-1 Santa Ana Freeway	1,007.40	133.43	40.38	12	14	26.1	14.1	1,007.40	35.24	27.7	27.7
C-2 Avenida Boulevard	548.00	36.82	12.27	3	3	33.3	14.9	548.00	13.44	36.3	36.3
C-3 Glendale-Garfield (H)	5,607.00	138.07	26.27	10	10	36.1	13.3	146.12	14.88	7.9	7.9
C-4 Greenway-Bellflower	517.50	27.21	6.70	3	3	38.8	12.9	471.50	31.51	100.0	100.0
C-5 Redondo-Beverly	421.54	57.54	15.87	4	4	26.6	12.8	421.54	32.54	100.0	100.0
C-6 Whittier Boulevard	2,614.15	143.74	14.20	24	27	7.8	12.4	956.86	61.62	25.1	25.1
C-7 Sepulveda	612.30	41.40	4.72	3	3	14.2	12.8	110.25	12.37	24.1	24.1
C-8 Olympic-Whittier	576.00	36.11	9.57	3	3	38.2	14.9	210.41	18.25	50.4	50.4
C-9 Culverwood-Beverly	807.10	28.82	14.14	2	2	59.5	11.3	747.50	41.98	82.7	82.7
C-10 Whittier-Bellflower	280.80	21.70	6.44	2	2	23.4	17.9	249.40	21.70	100.0	100.0
C-11 Buena Vista	427.41	33.33	7.42	4	4	27.3	13.1	427.41	33.33	100.0	100.0
C-12 Imperial Highway	570.30	41.41	4.87	4	4	6.6	17.3	570.30	39.51	41.3	41.3
C-13 Pioneer Boulevard	421.80	34.10	5.53	4	4	14.7	14.4	421.80	34.10	100.0	100.0
C-14 Redondo Beach	1,057.00	42.29	8.22	6	6	21.4	10.9	420.00	32.38	41.8	41.8
C-15 Flamingo-Beverly (H)	2,044.70	217.70	34.85	15	15	11.3	12.7	207.48	52.44	15.1	15.1
C-16 Alhambra Boulevard	395.00	24.78	8.30	2	2	39.3	12.5	288.00	24.78	100.0	100.0
RTD No. 27 (Overhaul)	313.70	46.44	17.40	5	5	26.2	12.5	0	0	0	0
TOTAL	18,512.30	1,286.11	329.48	112	116	32.8	14.6	7,372.18	321.58	28.8	40.2
DIFFERENCE	+2,118.29	+624.94	+111.99	+27	+28	+1.6	-3.2	+2,653.44	+75.16	+20.6	+10.8

IMPLEMENTATION...

- RTD should replace its current service within the Mid-Cities area with the 16 proposed new lines, except for current RTD lines 34, 55 and 77 which should be modified.
- The 16 new lines should be operated initially at the Base Level Service except for Lines C-1 and C-6 which should be operated at Developmental Level A.
- If resources permit and the initial implementation shows a favorable patronage and public response, service on Lines C-2, C-4, C-9, C-11 and C-16 should also be upgraded to Developmental Level A.
- Boarding and alighting checks should be made before the change is made and again within 3 and 6 months after the proposed system was introduced. This information should be used to modify routes and schedules of the proposed system.
- Developmental Level B should be implemented only after the Base Level Service has been in operation and the need for additional coverage can be documented. Lines B-3 and B-4 are the leading candidates.
- Changes in the demography, land use and development of the area should be monitored yearly. This information should be used to modify the existing service or to expand it.
- RTD should take the initiative to implement the proposed improvements of the interconnections between its Mid-Cities area service and that of the Long Beach Public Transportation Company. The proposed exchange of route miles would not affect subsidy income of either operator.
- The plan for the recommended system could be implemented within 90 days after its adoption.

