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A REPORT TO THE
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
BOARD OF DIRECTORS

ON
TRANSPORTATIONALLY DYSFUNCTIONAL HANDICAPPED
POPULATION IN LOS ANGELES COUNTY

BY
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TRANSPORTATIONALLY DYSFUNCTIONAL HANDICAPPED POPULATION IN LOS ANGELES COUNTY

SUMMARY

For the past several months the District's special consultant has worked with the Coordinator of Special Services and members of the Service Analysis Section in locating and analyzing various studies which focus on the handicapped. Although each study approaches their target from a different level, it has been our experience that each has been valuable, although perhaps in a limited way to the needs of the District. The most definitive and useful report for the District was published by the Transportation Systems Center for the Urban Mass Transportation Administration in October of 1973.

Direct correlation between this national study and Los Angeles County yields a conservative estimate of 350,000 transit dysfunctional persons.

Our preliminary analysis of the District's own Reduced Fare Program indicates that, although the majority of the cardholders are present riders and, therefore, not transit dysfunctional, this study strengthens our initial premise that there are no definite concentrations of handicapped population within Los Angeles.

Introduction:

For the purposes of this project, the UMTA definition of "handicapped person" (see Federal Register, February 26, 1975) was used, in part, meaning "any individual who, by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, including those who are non-ambulatory wheelchair-bound and those with semi-ambulatory capabilities, is unable without special facilities or special planning or design to utilize mass transportation facilities and services as effectively as persons who are not so affected."

While such a definition includes the mentally or emotionally handicapped, these categories have not been included in the count, since they would not be affected by the District's proposed new bus design. The deaf and blind have been listed separately for the same reason. According to the State Department of Rehabilitation, the number of temporarily disabled people is relatively constant, though gradually increasing, at any given time, so they are included.

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Several methods were used simultaneously to obtain the data in this report. One such approach was to mail a questionnaire (see attachment) to a list of over 300 organizations of, and agencies that serve, the disabled. Unfortunately, very little useful information was acquired. However, some zip-code location data was obtained from some organizations of the handicapped.

It might be thought that a simple determination could be made from the records of sales of orthopedic equipment. However, even if the major manufacturers were willing or able to furnish such data (which they are not), there would be no way of eliminating those people who have more than one wheelchair, or a walker and a wheelchair, for example. Also, hospitals and convalescent homes maintain large stocks which do not necessarily correspond to actual numbers of disabled individuals.

Data Base:

Our previous estimate of 127,400 people with a transportationally dysfunctional handicap was based on preliminary data from several partial sources: school children, those receiving some kind of financial assistance, members of particular organizations, and estimates supplied from the Department of Rehabilitation. The major difficulty with figures supplied by the Department was an insufficient breakdown. It was necessary to make assumptions about the actual number of people who could not use present transportation included in their broad "orthopedic" category. Additionally, some projections were made on the basis of a study done by Mark Battle Associates on a limited sample.

On the other hand, the new figure is an extrapolation of a much more extensive survey done by the Transportation Systems Center for the Urban Mass Transportation Administration (see "The Handicapped and Elderly Market for Mass Transit").

In addition to the TSC study, we cross-checked with information from the Health Resources Administration of HEW (see "Limitation of Activity and Mobility due to Chronic Conditions" 1972, et. seq.).

The extrapolation was derived from a national sample, and, while we are confident that the figures represent a good base, there is reason to believe that the figures are too low.

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There has been a general trend of population movement to the West Coast. In addition, some people with certain disabilities would find the climate more suitable. Also, California boasts some of the best architectural barriers laws and the high incidence of new construction means that a large portion of the public facilities are accessible. Also, until a year or so ago, state payments to the disabled were higher than any other state.

Finally, Rancho Los Amigos Rehabilitation Center and the Long Beach Veterans Hospital are considered to be among the best in the nation for rehabilitation programs. All of these factors may mean that Los Angeles County has a higher percentage of disabled people than the national average.

Substantiation of Approach:

Determining the exact number of people with transportation dysfunctions is at this time impossible, because no comprehensive surveys oriented specifically to transportation handicaps have been undertaken. Following extensive investigation of available sources and consultation with Federal, State, County and City agencies, the choice was gradually narrowed to the most comprehensive study available: The Handicapped and Elderly Market for Urban Mass Transit. In preparing this report for UMTA, the Transportation Systems Center analyzed over 300 previous studies of which approximately 100 were deemed highly relevant. Reliable estimates of the transportationally handicapped were made by projecting disabling condition incidence rates (determined by the National Health Survey) on the national population. These projections yield the 1970 estimates for each handicap class.

The estimates obtained were based on a handicap classification method which was devised to be compatible with both the available data on handicapped and the different kinds of travel barriers encountered in public transportation.

Data is derived primarily from the 1970 Census and various national health studies. Information from the Census is employment oriented only. That is, the question asked was whether or not the respondent was absent from the national job pool from 1960-1970 as a result of a physical disability; thus, excluding those employed handicapped, those who had not yet entered the job market (i. e. college students

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and trainees), and those who did not regard their disability as the primary reason for their unemployment.

Information from health statistics is categorized by disabling condition, not extent of disability. Therefore, all those with Muscular Dystrophy, for example, are counted together, whereas some may be ambulatory and others confined to wheelchairs.

From this data base, the percentages of incidence of each disability class were derived and, according to standard statistical procedures, the figures were projected into Los Angeles County. Data from major and minor sources was cross-correlated and checked to assure maximum accuracy. In checking with other agencies, including some other major transit properties, there is consensus that the information sources are the best available, short of an extensive and costly sampling program.

Location of the Handicapped:

As mentioned previously, some zip-code information was obtained from some organizations of the disabled and the Department of Motor Vehicles records of automobile special license plates. Such information is sketchy at best but does give some evidence of earlier assumptions.

Data obtained earlier from the State Department of Rehabilitation indicated concentrations of the disabled in low income areas. This was predictable since the source of data was location of those receiving financial aid from the State.

Similarly, membership rosters from the California Association of the Physically Handicapped indicate apparent concentrations around active local chapters. Understandably, active chapters draw members in close proximity to meeting places. It is significant that, for almost two years in a row, that organization has shown a steady 60% to 75% increase in membership.

The California Paralyzed Veterans of America, whose headquarters is at the Long Beach Veterans Hospital, has a concentration of members in Long Beach and surrounding areas. In fact, every agency and organization which supplied us with location information showed

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a concentration around the headquarters of that agency or organization. However, these organizations are scattered throughout the County and the conglomeration yields two facts: (1) there is virtually no zip code in Los Angeles County which does not have some handicapped people, and (2) depending upon the particular agency supplying the data, there are some concentrations in certain areas of the County. For example, those handicapped persons receiving rehabilitation through the State appear in larger concentrations in lower income areas.

Therefore, while this does not prove, it tends to substantiate the conclusion of the Transportation Systems Center study: the transportationally handicapped are almost uniformly dispersed throughout the general population.

Supplementary Programs:

The only real "hard" data comes from our own Reduced Fare Program, and the response is increasing. However, the applicants are very heavily weighted in terms of those who experience minimal transit dysfunction. It is difficult to convince those who cannot use the bus with relative ease to apply. However, I am working closely with our Marketing Department to promote the program in order to obtain the best possible data base.

The data base created by the Reduced Fare applications will be used as a "weight" factor to adjust the statistical information. It is staff's intention to continue to monitor available sources of information to refine our data. The Special Services Coordinator and I are working with demographers from the Department of Rehabilitation and other agencies to design a workable set of questions for the 1980 Census. Of course, the Board of Directors has already requested that UMTA conduct such a study and we intend to monitor any progress. The UCLA Urban Studies Department is contemplating a sampling survey and are now in the process of determining their optimum sample size and survey techniques. The actual survey is not scheduled to begin for at least six months. As new data becomes available, we intend to present your Board with updates on the statistics.

The chart on the following page shows, by type of dysfunction, the estimated number of handicapped in Los Angeles County. By taking UMTA's national projections and the ensuing percentage to the total population of the U.S., it is possible to derive an estimate for Los Angeles County using the ratio to the total population.

DISTRIBUTION OF NON-INSTITUTIONALIZED HANDICAPPED WITH
TRANSPORTATION DYSFUNCTIONS -- LOS ANGELES COUNTY AND THE UNITED STATES

Handicap Class	*Estimated No. of Handicapped in United States	% of Total U. S. Population 1970	Estimated L. A. County Population - 1970	% Distribution in Handicapped Population
Uses Wheelchair	430,000	0.211	14,838	3.46
Uses Walker	410,000	0.201	14,134	3.29
Uses other special aids (crutches, braces, artificial legs, etc.)	5,470,000	2.692	189,303	44.09
Other mobility limits (artificial arms, severe pulmonary condition, etc.)	3,310,000	1.629	114,553	26.68
Acute conditions (temporary)	490,000	<u>0.241</u>	<u>16,947</u>	<u>0.241</u>
SERIOUS TRANSIT DYSFUNCTION	10,110,000	4.974	349,775	77.76
Visually Impaired	1,970,000	0.970	68,183	15.88
Deaf	<u>330,000</u>	<u>0.162</u>	<u>11,392</u>	<u>2.65</u>
GRAND TOTAL	<u>12,410,000</u>	<u>6.11%</u>	<u>429,350</u>	<u>100.00%</u>

NOTE: Total United States Population as of April 1, 1975 = 203,184,774

Total Los Angeles County Population as of April 1, 1970 = 7,032,075

* The Handicapped and Elderly Market for Urban Mass Transit (PB-224 821), Transportation Systems Center (prepared for Urban Mass Transportation Administration), October 1973, Figure 4.1, page 6. (Includes elderly handicapped and non-elderly handicapped.)

SCRTD Reduced Fare Card Application Data Summary

<u>Transportationally Dysfunctional Impairment:</u>	<u>Number</u>	<u>%</u>
(1) Confinement to a wheelchair	28	2
(2) Significant difficulty negotiating stairs	508	35
(3) Significant difficulty boarding or alighting from a standard bus	452	32
(4) Difficulty standing in a moving vehicle	619	43
(5) Visual impairment (not correctable by glasses)	350	24
(6) Hearing impairment	120	8
(7) Mental retardation, emotional disorders, etc.	392	27

TOTAL CARDS ISSUED

Permanent Disability	1,383	97
Temporary Disability	48	3

NOTE: Totals may not correspond due to individuals with multiple disabilities.

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Derivation of the Estimated Number of Non-Institutionalized
Elderly Handicapped in Los Angeles County

Estimated Number of Elderly Handicapped (65 years or over) in
the United States (1970) = 6,100,000.*¹

Number of persons in the United States (65 years or over) as of
1970 = 20,066,000.*²

Hence, the Elderly Handicapped represent 30.50% of the total
U. S. Elderly Population.

As of 1970 there were 652,399 persons aged 65 years or over.*³

Assuming that 30.40% of the Elderly are Handicapped, the esti-
mated number of Elderly Handicapped = 201,369.

*1 The Handicapped and Elderly Market for Urban Mass Transit
(PB-224 821), Transportation Systems Center (prepared for
Urban Mass Transportation Administration), October 1973,
Figure 4.1, page 6.

*2 1970 U.S. Census of Population, U.S. Department of
Commerce.

*3 Ibid.

Respectfully,

Dennis Cannon

Dennis Cannon
Consultant

Attachment



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

1060 SOUTH BROADWAY • LOS ANGELES, CALIFORNIA 90015 • TELEPHONE (213) 749-6977

The following questionnaire is part of a continuing effort by the Southern California Rapid Transit District to obtain accurate statistics on the type and locations of physical disabilities in Los Angeles County. This information will help in the proper placement of the first accessible buses.

The Reduced Fare Program, which we have previously asked you to promote among your members/clients, will ultimately provide this data. In the meantime, can you provide us with some preliminary statistics? If possible, please provide us with zip code locations of your members/clients (we are NOT asking for your mailing list, only the numbers of people per postal zip code). If you can provide such demographics, please attach the information to the questionnaire and return it as soon as possible (before _____) to Dennis Cannon, SCRTD Planning Department, Room 410.

Name of Organization/Agency _____

Mailing Address _____

_____ Telephone _____

Name of Person Completing Form _____

Title of Person Completing Form _____

Address (if different from above) _____

1. Please check the type of organization this is:

- Rehabilitation center ()
- Hospital/convalescent home ()
- University/college/school ()
- Special interest group ()
- Social/fraternal ()
- Charitable ()
- Public/governmental ()
- Other (please specify) _____

2. Please check the criteria for membership/affiliation:

- () Particular disability ... Specify _____
- () Income level ... Specify _____
- () Age
- () Student
- () Membership fee
- () Racial/ethnic
- () Veteran
- () Other ... Specify _____

3. Group Identification:

	Number
Total Members/clients _____	
Under 18	_____
Over 64	_____
Blind	_____
Deaf	_____
Amputations	_____
Orthopedic	_____
Wheelchair	_____
Epileptic	_____
Mental disorders	_____
Semi-ambulatory (crutches/braces)	_____
Bed-ridden	_____

4. Is your organization/agency providing any special transportation services for your members/clients?

() Yes () No

If "YES"

a. Is this service available to non-members/clients?

() Yes

() No

b. What geographical area does it serve? _____

c. What types of trips are provided? (i.e., shopping, work, entertainment, etc.) _____

d. What proportion of the membership uses this service? _____

e. Please describe:

Type of service _____

Days of operation _____

Hours of operation _____

f. Is there a charge for this service?

() Yes ... How much? _____

() No