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# Transportation coordination for the mobility impaired in San Antonio-Bexas County, Texas

Roberta Schwartz  
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TRANSPORTATION COORDINATION FOR THE MOBILITY  
IMPAIRED IN SAN ANTONIO-BEXAR COUNTY, TEXAS

ABSTRACT OF RESEARCH PROJECT

Presented to the Faculty of the Department of  
Urban Studies of Trinity University in Par-  
tial Fulfillment of the Requirements

For the Degree of  
Master of Arts

By

Roberta R. Schwartz, B.A.

This Urban Studies Research Project examines elderly and handicapped transportation in San Antonio-Bexar County, Texas. It attempts to define the local mobility impaired; the current condition of existing transportation systems available to them; and the future potential of coordinating these resources in an effort to make transportation systems more efficient, cost-effective, and responsive to the handicapped people's need for transportation.

A city-wide survey of the mobility impaired, conducted by the writer and her associates in 1980, describes

the socioeconomic characteristics and geographic distribution of this subpopulation. Additional national studies by the U.S. Department of Transportation and others, supplement the local findings on the transportation patterns and needs of the elderly and handicapped.

The Research Project presents the results of a 92-Age survey conducted by the writer in 1979-80. The findings describe administrative, operational, and maintenance characteristics of 36 human service organizations which provide transportation to the elderly and handicapped.

Transportation coordination of these systems is defined and described, as well as the recent national and local policies and practices relative to coordination. The administrative issues of coordination are presented as a result of evaluation studies of several national demonstration programs and established brokerage systems.


TRANSPORTATION COORDINATION FOR THE MOBILITY  
IMPAIRED IN SAN ANTONIO, TEXAS

ROBERTA RUTH SCHWARTZ

APPROVED BY THE DEPARTMENT OF URBAN STUDIES:

  
Chairperson

APPROVED BY THE GRADUATE SCHOOL:



August 8, 1982



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USMC, Ret., Parliamentarian, Special Services Advisory Committee; Ms. Joyce Jenks, President, San Antonio Concerned Citizens for the Handicapped; Rachel Rodriguez; Ms. "Cuzzin" Ida Kenny, Vice-Chairperson Special Services Advisory Committee; and the memorable Blue Bonnet Artist, Ms. Emma Ammon. To them I owe what I really learned about at VIA--lots of motions, lots of listening, lots of mistakes, lots of debates lots of rules, and afterwards--always--lots of friendship.

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Most important of all, thanks to Mr. Carlton Poling,

## DISCLAIMER

The opinions and conclusions contained in this Research Project represent the views of the writer and do not necessarily represent the official views or policies of VIA Metropolitan Transit, or any other agency.



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## LIST OF ILLUSTRATIONS

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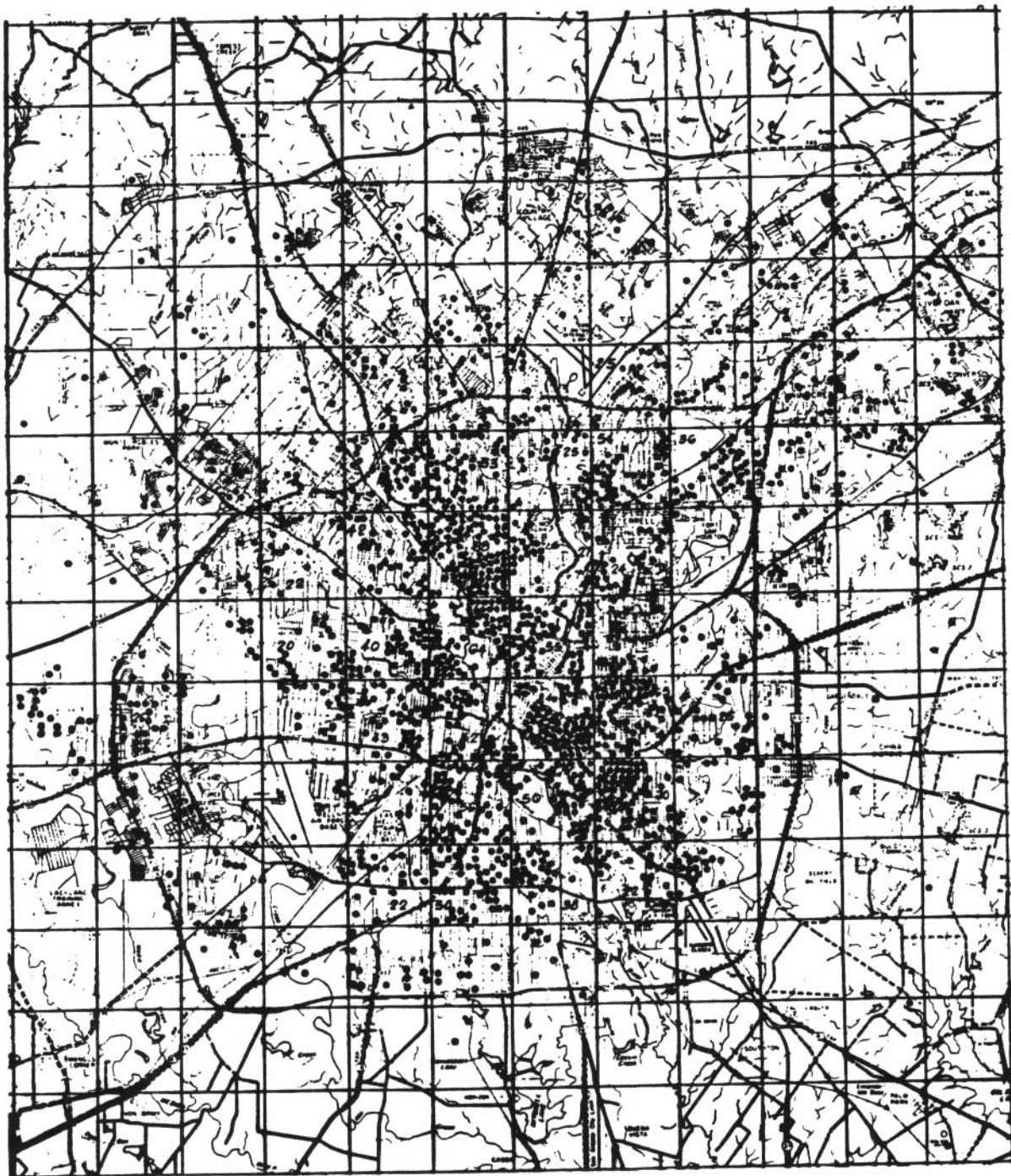


Fig. 2. 1980 locations of mobility impaired

SOURCE: Transportation Coordination Team, "Mobility Impaired Survey: San Antonio/Bexar County, Texas" (San Antonio-Metropolitan Planning Organization, 1981. (Mimeographed.)

1. Geographic distribution
2. Sex
3. Age
4. Ethnicity/Race
5. Income
6. Employment
7. Housing
8. Disability
9. Mode of transportation and level of satisfaction
10. Mode by disability
11. Trip purpose
12. Trip frequency

Where possible, the results were compared to the findings of the Department of Transportation (DOT) in its national studies on the elderly and handicapped (1978). In several cases, local findings were found to be similar. Several other local and national studies supplement the TCT's findings.

#### Geographic Distribution

Most of the respondents to the TCT survey reside within Interstate Loop 410 (Figure 2). The heaviest concentrations are in North Central San Antonio and Southeast San

## CHAPTER II

### TRANSPORTATION CHARACTERISTICS OF THE MOBILITY IMPAIRED

Literature on the national handicapped population is plentiful, but local information is limited. In August, 1980 a subcommittee of the Metropolitan Planning Organization, called the Transportation Coordination Team (TCT), conducted a citywide survey of the mobility impaired. The TCT wanted to obtain demographic, geographic, and travel behavior information on the mobility impaired.

The survey's reliability was questioned by several people.<sup>1</sup> There were 320,000 surveys mailed to Bexar County households through City Public Service utility bills. Only 2,008 surveys were returned.<sup>2</sup> It is questionable as to how representative this sample size is of the general population. Some researchers say it is representative, and others say it is not.<sup>3</sup>

Nevertheless, local transportation planners and technicians compiled the information and categorized it into twelve areas:

<sup>4</sup>U.S., Dept. of Transportation, "Nondiscrimination on the Basis of Handicap; Interim Final Rule and Request for Comments," Federal Registrar 46, No. 138 (20 July 1981): 37488.

<sup>5</sup>Ashford and Bell, p. 73.

<sup>6</sup>U.S. Congressional Budget Office, Urban Transportation for Handicapped Persons: Alternative Federal Approaches (Washington, D.C.: Government Printing Office, 1979), p. 8.

<sup>7</sup>U.S., Department of Transportation, UMTA Act of 1964, As Amended Through December 1978, and Related Laws (Washington, D.C.: Government Printing Office, 1978), p. 29.

<sup>8</sup>American Public Transit Association, '78-'79 Transit Fact Book (Washington, D.C.: APTA, 1979), p. 76.

<sup>9</sup>Economic Research Department, "San Antonio Facts" (San Antonio, Tex.: Greater San Antonio Chamber of Commerce, 1981), p. 1. (Mimeographed.)

<sup>10</sup>Office of the Governor, Texas Past and Future: A Survey (Austin: Texas Rehabilitation Commission, 1980), p. 1.

<sup>11</sup>"Metropolitan Rankings," U.S. News & World Report, 1982, n.p. (Accessed from AACOG Reproduction.)

<sup>12</sup>Economic Research Department, "Demographics" (San Antonio, Tex.: Greater San Antonio Chamber of Commerce, 1981, p. pd 3e2. (Mimeographed.)

<sup>13</sup>Economic Research Department, "San Antonio Facts," p. 1.

<sup>14</sup>Economic Research Department, "Demographics," p. pd 3e2.

TABLE 3

## AGE DISTRIBUTION, BEXAR COUNTY, 1980

| Age Distribution | % of Total Population |
|------------------|-----------------------|
| 0 - 5            | 11.6                  |
| 6 - 13           | 14.2                  |
| 14 - 17          | 7.6                   |
| 18 - 20          | 6.5                   |
| 21 - 29          | 16.3                  |
| 30 - 39          | 13.6                  |
| 40 - 49          | 9.7                   |
| 50 - 64          | 12.5                  |
| 65+              | 8.1                   |
|                  | <hr/> 100.10          |
| Average Age      | 30.1                  |
| Median Age       | 26.4                  |

SOURCE: Economic Research Department, "Demographics" (San Antonio, Tex.: Greater San Antonio Chamber of Commerce, 1918), p. pd 3e2. (Mimeographed.)

Footnotes

<sup>1</sup>Norman Ashford and William G. Bell, "Transport for the Elderly and Handicapped--An Overview from the Late 70s," Transportation Planning and Technology 5 (1979): 71-74.

<sup>2</sup>Ibid., p. 73.

<sup>3</sup>Ibid.

TABLE 1

BEXAR COUNTY DEMOGRAPHICS  
1981 FORECAST REPORT

|                        |         |
|------------------------|---------|
| Population             | 999,422 |
| Households             | 313,837 |
| Families               | 227,685 |
| Average Household Size | 3.1     |
| Average Family Size    | 3.5     |

|                         |          |
|-------------------------|----------|
| Per Capita Income       | \$ 6,457 |
| Avg. Family Income      | \$22,554 |
| Median Family Income    | \$18,587 |
| Avg. Household Income   | \$20,564 |
| Median Household Income | \$16,717 |

SOURCE: Economic Research Department, "Demographics"  
(San Antonio, Tex.: Greater San Antonio Chamber of Commerce  
1981), p. pd 3e2. (Mimeographed.)

TABLE 2

RACE DISTRIBUTION, BEXAR COUNTY, 1980

|          | Percent    |
|----------|------------|
| Anglo    | 45.3       |
| Black    | 7.0        |
| Hispanic | 46.6       |
| Other    | <u>1.1</u> |
| TOTAL    | 100        |

SOURCE: Economic Research Department, "San Antonio Fact  
(San Antonio, Tex.: Greater San Antonio Chamber of Commerce  
1981), p. 1. (Mimeographed.)



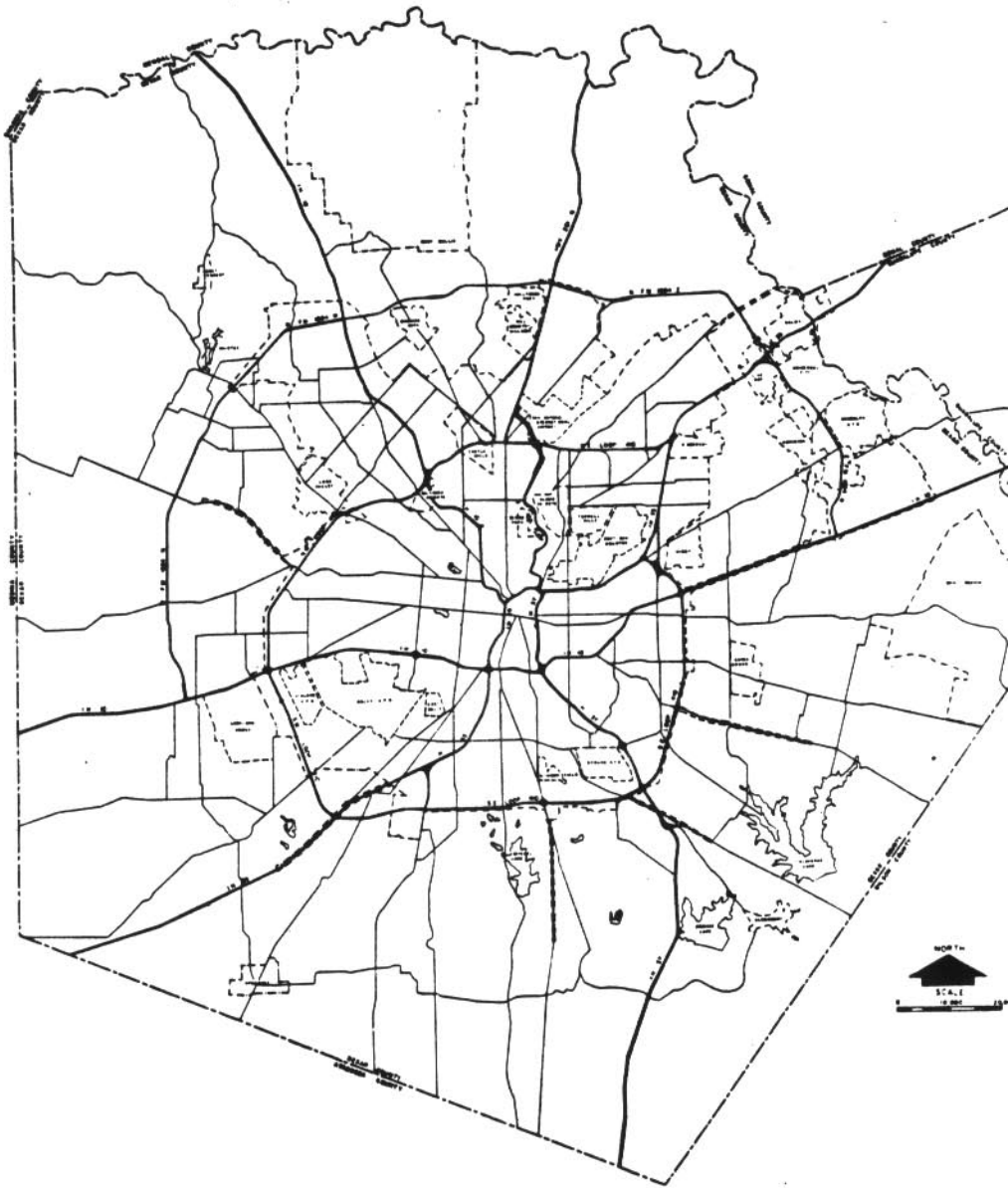


Fig. 1. Study Area, San Antonio,  
Bexar County, Texas

SOURCE: Planning and Community Development Department, San Antonio: City of San Antonio, 1976.

## Study Area

This Research Project examines the mobility impaired population and paratransit services in Bexar County, Texas, which includes the central city of San Antonio and twenty-one satellite cities, some of which are surrounded by the City of San Antonio (Figure 1). Bexar County encompasses 1,246 square miles,<sup>9</sup> and has a population of 988,888.<sup>10</sup>

San Antonio is one of the poorest metropolitan areas. Per capita income is \$6,457 and the median household income is \$16,717 (see Table 1).<sup>12</sup> The County population is predominantly minority. Seven percent are black; 46.6% are Hispanic; 45.3% are Anglo; and 1.1% are classified as other (see Table 2).<sup>13</sup> The population is evenly distributed among three age groups: 0-17 years old, (33.40%); 18-39 years old (36.40%); and 40 years old and over (30.30%). Only 8.1% of the population is 65 years and older (see Table 3).<sup>14</sup>

person who is handicapped is defined as:

any individual who by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity, or disability, including any person who is wheelchair bound or has semi-ambulatory capabilities, is unable without special facilities or special planning or design to utilize public transportation facilities and services effectively.<sup>7</sup>

Another term which will be used is coordination. This describes the concept of networking transportation systems. By combining part of a system's resources with another system's resources, the output of transportation service for the mobility impaired is ideally maximized. Operational, administrative, and/or maintenance functions are the kinds of resources which can be coordinated.

Another term used is paratransit. This is any type of collective passenger transportation for people "on a regular and predictable basis through demand-responsive scheduling and/or flexible routing of vehicles." A system is demand-responsive when a person calls a provider because he has a trip demand to be met, and the system responds directly to the demand. Paratransit services include small vans run by agencies, vanpools, carpools, airport limousines, jitneys and taxis.<sup>8</sup>

participation activities among handicapped people concerned about transportation presented in Chapter III.

The development of paratransit systems over the last two decades in the United States is outlined in Chapter IV. In Chapter V, Bexar County's existing paratransit resources are described from the findings of the 92-Agency Survey conducted under the auspices of the Transportation Coordination Team.

The definition and concepts of coordination are explained in Chapter VI. Federal, state, and local policies influencing coordination up to the present are discussed in Chapter VII. Chapter VIII addresses the major issues of coordination. It examines several coordination programs.

The Research Project concludes with the findings on some of the local handicapped people's transportation needs; the condition of local transportation resources; and the potential for paratransit coordination.

### Definitions

Throughout this research project, the term mobility impaired is used. It refers to persons who are unable to utilize fixed-route transportation because of a handicap. A

## Statement of Purpose

This paper examines elderly and handicapped transportation policies and practices in an attempt to answer three questions--(1) who are the mobility impaired in San Antonio? (2) what are the existing transportation resources available to them? and (3) will the transportation problems of the mobility impaired people and transportation providers be reduced if resources are consolidated?

The first assertion is that the local mobility impaired people are a minority population with special transportation needs. Secondly, there are a great deal of public transportation resources available in the local community which may not be providing an adequate level of transportation to the mobility impaired. And last, coordination of paratransit resources should increase rides for the mobility impaired and increase the efficiency of paratransit operation.

## Nature and Scope

This Research Project provides a profile of the mobility impaired population in Bexar County from recent studies conducted by the Transportation Coordination Team in Chapter II. A historical overview of national and local citizen

of approximately 200 individuals who currently are idle and in receipt of the French adult handicapped allowance.<sup>5</sup>

By earning a salary the handicapped people would not only save the government money, but pay taxes too.

There are about 7.4 million persons in the United States who are handicapped. By the year 2010, this population is expected to increase by 70 percent.<sup>6</sup> Research in the area of transportation for elderly and handicapped people is important. The future demand in our industrialized society will increase. In the year 2000, public services will be pressured less by social and economic problems if transportation planners and administrators continue--today--to seek innovative elderly and handicapped transportation systems, and to improve policy making decisions.

On the local level, the transportation needs of the handicapped are especially important. San Antonio is experiencing a significant amount of industrialized growth. More economic opportunities are expected to develop, as well as an emphasis on education and new ideas to accommodate and stimulate the growth. Improved transportation systems for the elderly and handicapped should be a part of that growth.

In the United States, the approach to seek positive change has centered on the social aspects of accessible transportation. The argument is based on "the constitutional guarantee of equal rights and equal protection under the law."<sup>2</sup>

Based on court decisions with respect to racial (and gender) segregation, where 'separate but equal' provisions were found to be unconstitutional, the disabled have argued that all public facilities, including and especially transport, must be equally accessible to the handicapped. This argument is based on the contention that public monies for public facilities must not be spent on schemes which are exclusive to a particular segment of the population.<sup>3</sup>

This American approach changed with the Reagan administration. In 1981, a Presidential Task Force, headed by Vice-President Bush, regarded the Biaggi Amendment, as amended, to be a costly and inflexible guideline.<sup>4</sup> The separate-but-equal approach no longer seemed viable, as the national focus shifted toward conservative economics. It is likely that economics will take on increasing importance in the 1980s. In France, a recent proposal was made by the French International Working Party on Transport for the Handicapped. The proposal

. . . recommended an appropriation of 500 million Fr., for measures which would substantially increase the urban mobility of the disabled. Dessertine has indicated that the annual costs of this scheme would be more than offset by the re-integration into the working population

## CHAPTER I

### INTRODUCTION

This Urban Studies Research Project examines three areas of elderly and handicapped transportation: the people; the resources; and the coordination of these resources.

Over the past fifteen years, there has been an international movement among industrialized societies to make public facilities, including transportation, accessible to the handicapped. In Great Britain, the 1968 Chronically Sick and Disabled Persons Act "requires that all public facilities shall be made accessible to the handicapped 'where practicable and reasonable.'" In France, a 1978 federal order states that "all facilities designed for public use must be accessible to individuals with reduced mobility." In the United States, the Biaggi Amendment to the 1970 Urban Mass Transportation Act initially stated that all public transportation facilities shall be made accessible to the elderly and handicapped.

These laws are:

three examples of national regulations which aim at implementing the social policies of the industrialized nations seeking the broadest possible integration of the handicapped in the normal national way of life.<sup>1</sup>



Antonio, Six traffic corridors were identified (Figure 3) with high concentrations of mobility impaired persons:

1. U.S. Hwy. 87 W between I.H. Loop 410 N, and U.S. Hwy. 81 N.
2. Austin Hwy. from Broadway St. to I.H. Loop 410 NE
3. New Braunfels Ave. between U.S. Hwy. 81 N, and I.H. 37 S.
4. U.S. Hwy. 81 S between I.H. Loop 13, and U.S. Hwy. 90 W.
5. W. Commerce St. from San Jacinto St. to Acme Rd.
6. I.H. Loop 410 NW from Timbercreek Rd. to U.S. Hwy. 90 W.<sup>4</sup>

### Sex

Over half (52.2 percent) of the target population are female, and 40.8 percent are male. Seven percent did not respond.<sup>5</sup>

### Age

The majority of the mobility impaired are elderly. Fewer than 15 percent are under twenty five years old, the prime education years (see Table 4).<sup>6</sup>

According to the national DOT study, the majority (78 percent) of elderly persons (62 years and older) are

TABLE 14

BEXAR COUNTY MOBILITY IMPAIRED BY MODE VERSUS  
THE GENERAL POPULATION, 1980

| Mode           | Bexar County<br>(Percent) | General<br>Population<br>(Percent) |
|----------------|---------------------------|------------------------------------|
| Car Driver     | 18.7                      | 64.0                               |
| Car Passenger  | 54.7                      | 30.0                               |
| Taxi Passenger | 6.5                       |                                    |
| VIATrans       | 11.0                      | N/A                                |
| Bus Passenger  | 22.0                      | 6.0                                |
| Other          | <u>8.5</u>                | <u>--</u>                          |
| TOTALS         | 121.4                     | 100                                |

SOURCE: Transportation Coordination Team, p. 16; Texas Department of Highways and Public Transportation, p. 46.

NOTE: Respondents reported multiple modes.

epileptics, arthritic people, etc.).

Fewer people reported using VIATrans (11 percent) and taxis (6.5 percent). (VIATrans is the public paratransit system to transport only people who cannot ride a bus). About as many people in the target population who said they were not satisfied as car passengers (46.1 percent), said that they were not satisfied as VIATrans users (48.8 percent). About seventy-three percent of the taxi users said that they were not satisfied with this mode.<sup>25</sup>

The urban mobility impaired represent 4.2 percent to 6.4 percent of the total urban population based on four comparative studies: the Urban Mass Transportation Administration and Transportation Systems Center (1973); the Michaels-Weiler Study (1974); the Teixeira Study (1975); and the Transportation Research Institute Study (1968). Bexar County's range is 41, to 63,289 persons using this formula. According to the CBO Report, the number of mobility impaired persons is likely to grow 70 percent by the year 2010. Bexar County would have 70,606 107,591 persons.<sup>23</sup>

#### Mode of Transportation and Level of Satisfaction

According to the TCT survey, 54.7 percent of the mobility impaired travel as car passengers (see Table 14). About half of them said that they were satisfied with this mode (see Table 15). Only 18.4 percent travel as car drivers, and 66 percent are satisfied with this.<sup>24</sup>

About 20 percent of the respondents said that they ride the bus and were basically satisfied; however, this is not consistent with being mobility impaired by definition. One explanation might be that some handicapped people have temporary conditions which permit them to ride the bus one day and prevent them from doing so the next (e.g., chemotherapy patients

TABLE 13

DEGREE OF ACTIVITY BY DISABLED POPULATION,  
BEXAR COUNTY, 1980

| Characteristic          | Number and Percent<br>Unable to Carry on<br>Major Activity        | Number and Percent<br>Limited of Amount<br>of Major Activity           | Number and Percent<br>Limited but Not in<br>Major Activity        | Total Number<br>and Percent<br>Bexar Count<br>Population |
|-------------------------|---|--|---|--|
| Orthopedic              | 1,625 (30.01)   | 7,075 (50.60)  | 43,706 (23.0)   | 52,400 (5.3)   |
| (Wheelchair             |   |  |   |  |
| Crutches, Canes,        |   |  |   |  |
| Walking Stick,          |   |  |   |  |
| Braces, Walkers,        |   |  |   |  |
| Others)                 |   |  |   |  |
| Deaf/Hearing Impaired   | 519 (9.60)  | 964 (6.90)   | 72,677 (38.20)  | 74,160 (7.5)   |
| Blind/Visually Impaired | 2,044 (37.75)   | 2,568 (18.40)  | 47,799 (25.10)  | 52,410 (5.3)   |
| Mentally Impaired       | 1,226 (22.64)   | 3,372 (24.10)  | 26,055 (13.70)  | 30,653 (3.1)   |
| TOTAL                   | 5,414 (100%)  | 13,979 (100%)  | 190,237 (100%)  | 209,630 (21.1)   |
|                         | 3.0% of all disabled<br>are unable to carry<br>on major activity. | 7.0% of all disabled<br>are limited in<br>amount of major<br>activity. | 90% of all dis-<br>abled are not<br>limited in major<br>activity. |  |

TABLE 12

## DISABLED POPULATION, BEXAR COUNTY, 1980

| Characteristic  | Number        | Percent of<br>Total<br>Disabled<br>Population | Percent of<br>Total<br>Bexar County<br>Population |
|---|---------------|---|---|
| <u>Orthopedic</u>   | <u>52,406</u> | <u>25%</u>                                    | <u>5.30%</u>                                      |
| Wheelchair  | 2,966         | (1.0)   |   |
| Crutches/Walkers  | 5,833         | (3.0)   |   |
| Canes/Walking Sticks  | 12,657        | (6.0)   |   |
| All Others  | 30,950        | (15.0)  |   |
| Deaf/Hearing Impaired<br>(includes ringing in<br>ears, etc.)                  | 74,160        | 35.38%  | 7.5%  |
| Blind/Visually Impaired<br>(includes blind in one<br>eye, seeing spots, etc.) | 52,406        | 25.0%   | 5.30%   |
| Mentally Impaired   | <u>30,653</u> | <u>14.62%</u>                                 | <u>3.10%</u>                                      |
| TOTAL   | 209,625       | 100%  | 21.20%  |

SOURCE: Handicapped Access Office, n.p.

NOTE: Not all are considered mobility impaired by transit's definition

activity. It could be said that 19,393 people in San Antonio are mobility impaired. This does not include those who are disabled because of age, but does include the people over 65 years old.<sup>21</sup>

TABLE 11

## ORTHOPEDIC POPULATION, BEXAR COUNTY, 1980

| Characteristic                                      | Number and<br>Percent of<br>Orthopedic<br>Population | Percent<br>of Total<br>Bexar County<br>Population |
|---|--|---|
| Wheelchair  | 2,966 (6%)   | .30   |
| Crutches/Walkers                                    | 5,833 (11%)  | .59   |
| Canes/Walking Sticks                                | 12,657 (24%)   | 1.28  |
| All Others (Artificial<br>Limbs, Deformities, etc.) | <u>30,950 (59%)</u>                                  | <u>3.13</u>                                       |
| TOTAL   | 54,406 (100%)  | 5.3%  |

SOURCE: Handicapped Access Office, "Disabled by Selected Characteristics," (San Antonio, Tex.: City of San Antonio, 1981), n.p. (Typewritten.)

NOTE: Not all are considered mobility impaired by transit definition.

deaf and blind are 60 percent of the population; and the mentally impaired are 15 percent.<sup>20</sup> With the exception of the 3,000 wheelchair users, it is difficult to determine how many cannot use the public bus.

About 3 percent of the disabled cannot carry on a major activity, such as getting to the bus stop and boarding a bus (see Table 13). Seven percent are limited in amount of major activity. The majority (90 percent) are not limited in major

TABLE 10  
MOBILITY IMPAIRED BY DISABILITY,  
BEXAR COUNTY AND NATIONAL, 1980

|  | Bexar County<br>(Percent) | National<br>(Percent) |
|--|---------------------------|-----------------------|
| Confined to Wheelchair                   | 26.2                      | 5.5                   |
| Use Limb Braces, Crutches,<br>Cane, etc. | 38.2                      | 26.1                  |
| Deaf                                     | 8.2                       | 21.1                  |
| Blind                                    | 12.3                      | 21.1                  |
| Mental Impairment                        | 8.0                       | --                    |
| Age Related                              | 21.6                      | --                    |
| Other                                    | <u>28.3</u>               | <u>47.1</u>           |
| TOTALS                                   | 142.8                     | 120.8                 |

SOURCE: Transportation Coordination Team, p. 14; U.S., Department of Transportation, pp. 16-18.

NOTE: Respondents reported multiple disabilities.

(see Tables 11 and 12). Its figures do not reflect DOT's estimates, but a more comprehensive definition of handicapped was used by HAO.<sup>19</sup>

HAO found that 21 percent of the total County population has a disability. Where physical limitations are involved though, 5.3 percent (52,406) of the total County population are orthopedically impaired and use wheelchairs, crutches/walkers, canes, walking sticks, and so on. These people represent 25 percent of the disabled population. The

TABLE 9

MOBILITY IMPAIRED HOUSING, BEXAR  
COUNTY AND NATIONAL, 1980

|           | Bexar<br>County<br>Respondents | 1970<br>Bexar County<br>Population<br>(Percent) |
|-----------|--------------------------------|---|
| Own House | 60.2                           | 62.4  |
| Rent      | 27.2                           | 35.8  |
| Other     | <u>12.6</u>                    | <u>1.8</u>                                      |
| TOTAL     | 100                            | 100   |

SOURCE: Transportation Coordination Team, p. 13.

Disability

Mobility impaired by disability are shown in Table 10. Slightly more than a quarter are confined to a wheelchair, but DOT's figures reflect only 5.5 percent. The category cited most often was use of limb braces, crutches, cane, and so on with 38.2 percent. This exceeds DOT's 26.1 percent.<sup>17</sup>

Not many deaf and blind people responded to the survey.<sup>18</sup> The survey was not administered in braille, and many blind may have missed identifying it and/or did not have assistance in filling it out.

In November, 1981, the HAO released its local statistics



TABLE 8

EMPLOYMENT OF STATUS OF MOBILITY IMPAIRED BY AGE GROUP,  
BEXAR COUNTY AND NATIONAL, 1980

|            | <u>16 to 24</u>           |                    | <u>25 to 62</u>                   |                           | <u>62 and Older</u> |                                   |                           |                    |                                   |
|------------|---------------------------|--------------------|-----------------------------------|---------------------------|---------------------|-----------------------------------|---------------------------|--------------------|-----------------------------------|
|            | Bexar<br>County<br>(m.i.) | National<br>(m.i.) | General<br>Population<br>(n.m.i.) | Bexar<br>County<br>(m.i.) | National<br>(m.i.)  | General<br>Population<br>(n.m.i.) | Bexar<br>County<br>(m.i.) | National<br>(m.i.) | General<br>Population<br>(n.m.i.) |
| Employed   | 14%                       | 27%                | 57%                               | 26%                       | 23%                 | 67%                               | 3%                        | 8%                 | 12%                               |
| Unemployed | 86%                       | 73%                | 43%                               | 74%                       | 77%                 | 33%                               | 97%                       | 92%                | 88%                               |
|            | 100%                      | 100%               | 100%                              | 100%                      | 100%                | 100%                              | 100%                      | 100%               | 100%                              |

SOURCE: Transportation Coordination Team, p. 12; U.S., Department of Transportation, p. 24.

NOTE: m.i. designates mobility impaired, and n.m.i. designates nonmobility impaired.

Employment by age group is shown in Table 8. Persons 16 to 24 years old have the highest rate of unemployment at 85 percent. This is higher than the national average of 73 percent. About three-quarters of the mobility impaired in their primary working years (25 to 62 years old) are not employed. This corresponds to the national figure of 77 percent.<sup>13</sup>

Crain and Associates (1976) found that the employed mobility impaired usually hold down only part-time jobs.<sup>14</sup> The Handicapped Access Office (HAO) of the City of San Antonio says that 74 percent of all disabled persons have less than twelve years of education or less. Only 26 percent have a high school education. HAO's figures do not include mentally impaired persons nor persons who are mobility impaired due to age.<sup>15</sup>

### Housing

The majority of the respondents own a home (60.2 percent) versus 27.2 percent who rent (see Table 9). The remaining 12.6 percent are presumed to be institutionalized.<sup>16</sup>

than the general population. A Congressional Budget Office (CBO) Report in 1979 says that the frequency of travel among the mobility impaired is closely related to income.<sup>10</sup> In Portland, Oregon, studies found that:

The severely disabled earning less than \$5,000 a year travel less than half as much as persons with like handicaps earning more than \$15,000. Severely disabled people with high incomes tend to travel almost as much as able-bodied individuals. Conversely, those with low incomes, in particular elderly handicapped persons, appear to travel less than any other group. . . .<sup>11</sup>

### Employment

Only 13.4 percent of the respondents are employed, while 42 percent of the total urban population (nonmobility impaired) are employed (see Table 7). Bexar County's figure resembles DOT's 85 percent figure of the unemployed mobility impaired.<sup>1</sup>

TABLE 7

#### MOBILITY IMPAIRED EMPLOYMENT, BEXAR COUNTY AND NATIONAL, 1980

|            | Bexar County<br>(Percent) | National<br>(Percent) | Total Urban<br>Population<br>(Percent) |
|------------|---------------------------|-----------------------|--|
| Employed   | 13.4                      | 15                    | 42                                     |
| Unemployed | <u>86.6</u>               | <u>85</u>             | <u>58</u>                              |
|            | 100                       | 100                   | 100                                    |

SOURCE: Transportation Coordination Team, p. 11; U.S. Department of Transportation, p. 23.

### Income

The local mobility impaired are predominantly low income (see Table 6). More than half (54 percent) of them have a monthly income of \$0 to \$417 which is an annual income of only \$5,000. Nearly 80 percent have an annual income of less than \$10,000. This is below the 1980 median household income of \$16,717. Only about 20 percent of the mobility impaired have an annual income over \$10,000.<sup>9</sup>

TABLE 6

MOBILITY IMPAIRED BY INCOME, BEXAR  
COUNTY AND NATIONAL, 1980

| Monthly Income   | Bexar County<br>(Percent) | National<br>(Percent) |
|------------------|---------------------------|-----------------------|
| 0 - \$417        | 54.0                      | 52.0                  |
| \$418 - \$833    | 24.4                      | 19.0                  |
| \$834 - \$1,250  | 10.0                      | 13.0                  |
| \$1,251 and over | <u>11.6</u>               | <u>16.0</u>           |
| TOTALS           | 100                       | 100                   |

SOURCE: Transportation Coordination Team, p. 10; U.S. Department of Transportation, p. 27.

An income level may be reflective of travel behavior. Many mobility impaired are more dependent on public transportation, yet they are less likely to be able to afford it

### Ethnicity/Race

Findings on ethnicity/race in the TCT Survey were unreliable. The survey was not administered in Spanish, but about 48 percent of the County population is of Spanish language/Spanish surname. Only 25.8 percent of the respondents are Hispanic (see Table 5). It is very likely that a greater proportion of the mobility impaired are Hispanic than what the results actually show.<sup>8</sup>

TABLE 5  
MOBILITY IMPAIRED BY RACE/ETHNICITY  
BEXAR COUNTY, 1980

| Race/Ethnicity | Bexar County<br>(Percent) | Total<br>Population<br>(Percent) |
|----------------|---------------------------|----------------------------------|
| Anglo          | 59.8                      | 43.7                             |
| Black          | 9.0                       | 8.3                              |
| Hispanic       | 25.8                      | 48.0                             |
| Other          | 5.4                       | --                               |
| TOTALS         | 100                       | 100                              |

SOURCE: Transportation Coordination Team, p. 9; Texas Department of Highways and Public Transportation, San Antonio Bexar County Long Range Transportation Plan--Basic Elements (Austin: Texas State Dept. of Highways and Public Transportation, 1979), p. 279.

TABLE 4

MOBILITY IMPAIRED BY AGE, BEXAR  
COUNTY AND NATIONAL, 1980

| Years       | Bexar County<br>(Percent) | Cumulative | National<br>(Percent)* |
|-------------|---------------------------|------------|------------------------|
| 62 and over | 54.2                      | (100.00)   | 83                     |
| 41-61       | 22.4                      | (45.8)     | --                     |
| 26-40       | 9.2                       | (23.4)     | 9                      |
| 16-25       | 4.6                       | (14.2)     | 5                      |
| 6-15        | 2.0                       | (9.6)      | 3                      |
| 0-5         | <u>7.6</u>                | (7.6)      | <u>--</u>              |
| TOTALS      | 100                       |            | 100                    |

SOURCE: Transportation Coordination Team, p. 8; U.S., Department of Transportation, Summary Report of Data from National Survey of Transportation Handicapped People (Washington, D.C.: Government Printing Office, 1978), p. 21.

\*Base used is total persons five years old and over in each group.

not mobility impaired; however, the majority of the mobility impaired (83 percent) are elderly. Age is a transportation factor. As the size of the elderly population increases so will the population of the mobility impaired people.<sup>7</sup>

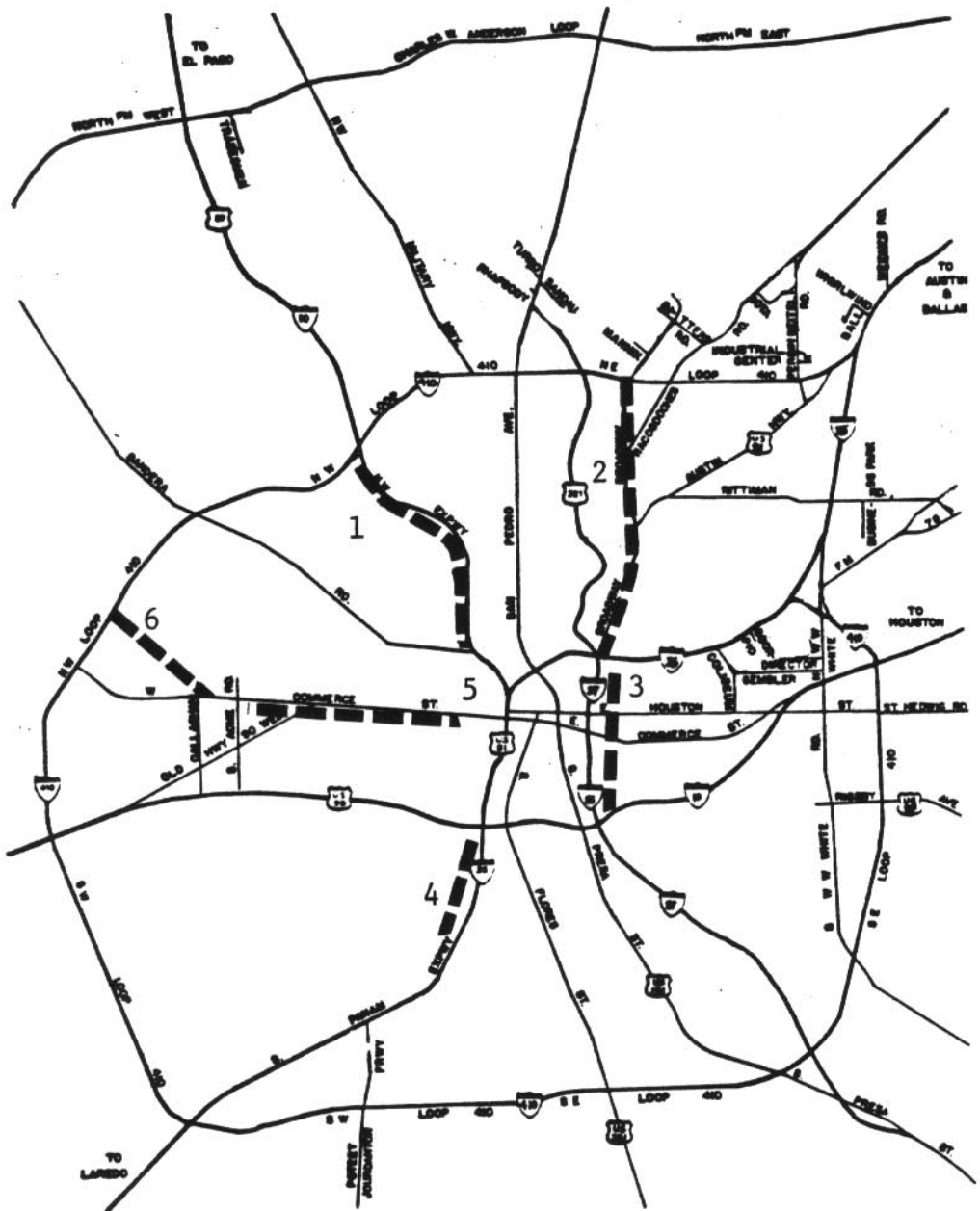


Fig. 3. Six corridor areas of mobility impaired in San Antonio.

SOURCE: Map provided by Economic Research Department, Greater San Antonio Chamber of Commerce, 1981. Adapted.

TABLE 15

SATISFACTION LEVEL OF MOBILITY IMPAIRED BY MODE  
OF TRANSPORTATION, BEXAR COUNTY, 1980

| Mode            | Satisfied<br>(Percent) | Not Satisfied<br>(Percent) |
|-----------------|------------------------|----------------------------|
| Car (Passenger) | 53.9                   | 46.1                       |
| Car (Driver)    | 66.0                   | 34.0                       |
| VIAtrans        | 51.9                   | 48.1                       |
| Taxicab         | 27.2                   | 72.8                       |
| Bus             | 56.8                   | 43.2                       |
| Other           | 43.5                   | 56.5                       |

SOURCE: Transportation Coordination Team, p. 17.

NOTE: Respondents reported multiple modes.

The ABT Associates study (1969) identified some variables which determine modal choices by the mobility impaired--"automobile ownership or availability, income, residential density, travel time and travel cost." Qualitative factors were also identified--convenience, reliability, comfort, access, and status. These are the same factors which nonmobility impaired consider in choosing their mode. The mobility impaired persons' choices are more limited though, due to the physical limitations.<sup>26</sup>



<sup>40</sup>Ibid., pp. 68-70.

<sup>41</sup>U.S., Congressional Budget Office, p. 19.

<sup>42</sup>Ibid., pp. 19, 21.

<sup>43</sup>Ibid., p. 21.

<sup>44</sup>"TCT Survey," p. i.

<sup>18</sup>Ibid.

<sup>19</sup>Handicapped Access Office, n. p.

<sup>20</sup>Ibid.

<sup>21</sup>Ibid.

<sup>22</sup>Crain and Associates, p. 24.

<sup>23</sup>U.S., Congressional Budget Office, p. 8.

<sup>24</sup>"TCT Survey," pp. 15-18.

<sup>25</sup>Ibid.

<sup>26</sup>Crain and Associates, pp. 66-68.

<sup>27</sup>"TCT Survey," pp. 21-22.

<sup>28</sup>Crain and Associates, p. 65.

<sup>29</sup>"TCT Survey," p. 22.

<sup>30</sup>U.S., Congressional Budget Office, p. 14.

<sup>31</sup>Ibid., p. 10.

<sup>32</sup>Crain and Associates, p. 66.

<sup>33</sup>"TCT Survey," p. 23.

<sup>34</sup>Crain and Associates, p. 55.

<sup>35</sup>Ibid., pp. 60, 65.

<sup>36</sup>Ibid., pp. 55, 58.

<sup>37</sup>Ibid., p. 58.

<sup>38</sup>Ibid.

<sup>39</sup>Ibid.

## Footnotes

<sup>1</sup>Ray Mundy, Brokerage for Executive Management Seminar (Monterey, Calif.: University of Tennessee, 1980), n.p.

<sup>2</sup>Transportation Coordination Team, Mobility Impaired Survey: San Antonio/Bexar County, Texas (San Antonio, Tex.: Metropolitan Planning Organization, 1981), pp. 2-3. (Mimeographed.) Hereafter referred to as "TCT Survey."

<sup>3</sup>Mundy.

<sup>4</sup>"TCT Survey," p. 4.

<sup>5</sup>Ibid.

<sup>6</sup>Ibid., pp. 6-8.

<sup>7</sup>U.S., Congressional Budget Office, p. 10.

<sup>8</sup>"TCT Survey," p. 9.

<sup>9</sup>Ibid., p. 10.

<sup>10</sup>U.S., Congressional Budget Office, p. 18.

<sup>11</sup>Ibid., pp. 18-19.

<sup>12</sup>Ibid., p. 11.

<sup>13</sup>Ibid., pp. 11-12.

<sup>14</sup>Crain and Associates, Transportation Problems of the Transportation Handicapped: Definitions and Counts (Washington, D.C.: Government Printing Office, 1976), p. 50

<sup>15</sup>Handicapped Access Office, "Bexar County Totals, Disabilities by Selected Characteristics" (San Antonio, Tex. City of San Antonio, 1981), n. p. (Typewritten.)

<sup>16</sup>"TCT Survey," pp. 12-13.

<sup>17</sup>Ibid., p. 14.

may be fewer since family members die, and they no longer have the school or workplace for a support system.

The majority of mobility impaired are unfortunately unemployed and must rely on family, friends, or the government to provide their daily needs. It is suspected that most of these people cannot work due to age or impairment; however, there are those who cannot get a job due to lack of education, transportation, and attitudinal barriers which stereotype them into negative roles.

HAO probably has the most complete local data on disability by category. Some of its categories should be more refined. In particular, under its orthopedic category (Table 11), 59 percent are categorized as "other." Such a great proportion of the "other" category raises questions about what their transportation needs might be.

It seems that some mobility impaired people drive or are capable of driving an automobile, but little is known how many of them have access to an automobile--perhaps very few based on the income information. A taxi study should be conducted locally to see how many mobility impaired can use this mode, and why their satisfaction with this mode is so relatively low.

the mobility impaired population, and indicate where more studies would be helpful.

San Antonio-Bexar County's mobility impaired residents are more urban than rural. In the future, it would be helpful to identify their major activity centers in order to measure their travel patterns relative to density. For instance, do the far northwest sites of the largest medical complex and university system have any effect on the urban mobility impaired travel patterns?

It appears evident that public transportation must be affordable to the mobility impaired since their income is typically low due to age, unemployment, disability, and lack of education. The mobility impaired elderly are generally retired and on fixed incomes. The studies point out that car availability is a major transportation factor since the majority can travel by this mode, as drivers or passengers, with family or friends. Two areas of future local study would be helpful: (1) what percentage of the mobility impaired have access to a car; and (2) what percentage have family and friends willing to help. Their income indicates that the availability of personal cars is probably low. If half of the mobility impaired are older, their family and friends

Handicapped persons make 75 percent fewer trips to work than do nonhandicapped persons. Of the 7.4 million handicapped people living in urban areas, only 1.1 million, or 15 percent, have jobs. The high incidence of retired persons among the handicapped population accounts for much of the lower employment. Even so, only 23 percent of the handicapped persons of working age held jobs in 1977,<sup>42</sup> compared to 64 percent in the able-bodied population.

Studies by ABT Associates, Arthur D. Little, Inc., and the CBO show that "lack of transportation is not a major reason why handicapped persons do not have jobs." The main reasons are because of family responsibilities, physical disabilities, and inability to work. Twelve percent said that if improved public transportation were provided, there would be more opportunities for jobs.<sup>43</sup>

### Summary and Findings

The TCT Survey concluded that the typical Bexar County mobility impaired person is an unemployed female, 62 years and older with an annual income of less than \$5,000. She owns a home and relies on a walker, crutch, or cane. Her primary travel purpose is medical related, and little does she travel for social or recreational reasons.<sup>44</sup>

The local TCT Survey and numerous other local and national studies provide insight into the characteristics of

TABLE 20

## MEDIAN TRIP FREQUENCY, CHICAGO

| Mobility Limitation | (Median Trips/Week)         |                          |                         |
|---------------------|-----------------------------|--------------------------|-------------------------|
|                     | Population Density Category |                          |                         |
|                     | Urban                       | High-Density<br>Suburban | Low-Density<br>Suburban |
| Severe              | 2.8                         | 2.8                      | 4.8                     |
| Moderate            | 3.1                         | 4.0                      | 4.7                     |
| Little              | <u>4.6</u>                  | <u>5.7</u>               | <u>5.9</u>              |
| TOTAL               | 4.3                         | 5.0                      | 5.5                     |

SOURCE: Crain and Associates, p. 56; Michaels and Weiler, p. v-8.

and 14 percent said they would make additional work trips.

Crain Associates concluded,

The implication of this latter finding is that the existence of a barrier-free transportation system would not induce many of the unemployed handicapped to seek employment. Apparently the lack of adequate transportation is not a major factor in their being unemployed.<sup>40</sup>

The CBO report revealed that those handicapped who have access to a car, as passengers or drivers, "would make hardly any extra journeys while those who usually do not have access to a car would travel 29 percent more, mainly for shopping but also for social and leisure purposes."<sup>41</sup>

Handicapped people travel less than nonhandicapped because fewer have jobs according to the DOT study.

by severity of mobility limitation or population density."<sup>38</sup>

### Trip Frequency

The TCT Study designed its questionnaire such that the number of regular trips taken by the mobility impaired could not be determined. The Michaels-Weiler Study though, conducted a survey of the Chicago, Illinois people and discovered that an inverse relationship exists between trip frequency and population density. Trip frequencies decrease with the increasing severity of mobility limitations in high-density areas. In low-density suburban areas, trip frequency is about the same for people with severe and moderate disabilities (see Table 20). The study says that "the TH living in suburban areas are likely to be more independent within each category of mobility limitation."<sup>39</sup>

Studies show that the mobility impaired would like to travel more often than they do. The Crain and Associates report cites a Boston study which indicates that two-thirds of the handicapped desire to make more social and recreational trips. If "low-cost barrier-free public transportation" were available, 50 percent said they would make more shopping trips; 16 percent said they would take more medical trips;



TABLE 19

DISTRIBUTION OF TRIP PURPOSE  
BY DENSITY, CHICAGO

| Trip Purpose      | Urban<br>(Percent) | High-Density<br>Suburban<br>(Percent) | Low-Density<br>Suburban<br>(Percent) |
|-------------------|--------------------|---------------------------------------|--------------------------------------|
| Recreation        | 18                 | 20                                    | 21                                   |
| Personal Business | 7                  | 7                                     | 10                                   |
| Shopping          | 26                 | 17                                    | 18                                   |
| Social            | 30                 | 37                                    | 30                                   |
| Medical           | 8                  | 3                                     | 3                                    |
| Work              | 11                 | 16                                    | 18                                   |

SOURCE: Crain and Associates, p. 59; Michaels and Weiler, p. v-19.

"in turn presumably reflects qualitative differences between the types of TH [transportation handicapped] in urban and suburban areas."<sup>36</sup>

ABT Associates report that 1.13 trips per day are taken by the handicapped, as per the Wilbur Smith and Associates Study (1968). Nonhandicapped persons take 2.23 trips per day. It appears that handicapped people make about half as many trips as the nonhandicapped people.<sup>37</sup>

The Michaels-Weiler Study reports handicapped persons "tend to make most of their trips on weekdays during off-peak periods. There is little variation in this behavior

TABLE 18

DISTRIBUTION OF TRIP PURPOSE BY  
MOBILITY LIMITATION, CHICAGO

| Trip Purpose      | Mobility Limitation |                       |                     |
|-------------------|---------------------|-----------------------|---------------------|
|                   | Severe<br>(Percent) | Moderate<br>(Percent) | Little<br>(Percent) |
| Recreation        | 21                  | 22                    | 19                  |
| Personal Business | 7                   | 7                     | 8                   |
| Shopping          | 11                  | 15                    | 23                  |
| Social            | 27                  | 34                    | 32                  |
| Medical           | 6                   | 7                     | 5                   |
| Work              | 27                  | 16                    | 12                  |

SOURCE: Crain and Associates, Transportation Problems of the Transportation Problems of the Transportation Handicapped: Definitions and Counts (Washington, D.C.: Government Printing Office, 1976), p. 57; R. M. Michaels and N. S. Weiler, Transportation Needs of the Mobility Limited (Evanston, Ill.: Northwestern University, 1974), p. v-8.

The Michaels-Weiler Study also shows a distinction between trip purposes and residential densities of the mobility impaired (see Table 19). The urban-mobility impaired apparently take more trips for shopping and medical purposes than the mobility impaired in suburban areas. They also take fewer work trips. The study explains this by two possible factors: (1) "the general differences in shopping behavior between urban and suburban communities;" and (2) "the difference in the importance of trips for medical purposes" which

TABLE 17

MOBILITY IMPAIRED MONTHLY TRIP PURPOSES,  
BEXAR COUNTY AND NATIONAL, 1980

| Trip Purposes     | Percent Trips Taken in Urban Areas Served by Mass Transit |                    |          |
|-------------------|---|--------------------|----------|
|                   | Bexar County<br>(m.i.)                                    | National<br>(m.i.) | (n.m.i.) |
| School            | 25.4  | 9.0                | 29       |
| Shopping          | 22.2  | 34.0               | 23       |
| Medical           | 21.2  | 11.0               | 2        |
| Work              | 20.0  | 18.0               | 39       |
| Social/Recreation | <u>11.2</u>   | <u>28.0</u>        | <u>7</u> |
|                   | 100   | 100                | 100      |

SOURCE: Transportation Coordination Team, p. 23; U.S., Department of transportation, p. 35.

NOTE: m.i. designates mobility impaired and n.m.i. designates non-mobility impaired.

disability varies from city to city. In Washington, D.C., most work and social/recreational trips were made by car. More medical trips were made by bus and taxi than by car. In Boston, more social/recreational trips were taken by car than for either work or shopping. The taxi was used most for medical and social/recreational trips. Unfortunately, the local TCT Survey was not designed to account for trip purposes by mode since multiple mode responses were permitted.<sup>35</sup>

In addition, the CBO says that about 93 percent of all handicapped persons in urban areas are physically capable of using taxis.<sup>31</sup> Crain and Associates report that the "degree of mobility limitation appeared to have little effect on taxi cab usage or on travel by automobile as a passenger."<sup>32</sup>

### Trip Purpose

The mobility impaired people's trip purpose by order of greatest frequency are shown in Table 17. It appears that trips made for school, shopping, health (medical), and work are fairly evenly distributed. Social/recreation trips are taken less.<sup>33</sup>

In the Michaels-Weiler Chicago Study (1974), it was discovered that a person with severe limitations travels a higher percentage of the time for work purposes--nearly twice as much as the person with little mobility limitation (see Table 18). The severely mobility impaired travel less for social or shopping purposes, and the "little" category travels more for social/recreation and shopping. Interestingly, medical trip frequencies for all categories do not vary much.<sup>34</sup>

Crain and Associates studied the handicapped in Washington, D.C. and Boston. They found that trip purposes by

TABLE 16

## MODE USAGE BY DISABILITY, BEXAR COUNTY, 1980

| Mode          | D I S A B I L I T Y          |   |                      |       |      |                |
|---------------|------------------------------|---|----------------------|-------|------|----------------|
|               | Confined<br>To<br>Wheelchair | Use Limb Braces<br>Crutches, Canes,<br>Etc. | Mentally<br>Impaired | Blind | Deaf | Age<br>Related |
| Other         | 9.4                          | 5.8   | 9.2                  | 9.7   | 7.2  | 6.9            |
| Bus           | 4.6                          | 14.3  | 27.9                 | 22.1  | 21.5 | 23.6           |
| Taxicab       | 4.6                          | 7.2   | 5.5                  | 8.1   | 8.3  | 5.7            |
| VIATrans      | 16.1                         | 6.9   | 9.3                  | 11.4  | 5.9  | 5.9            |
| Car Driver    | 13.3                         | 18.5  | 7.7                  | 10.7  | 15.6 | 14.8           |
| Car Passenger | 52.0                         | 47.2  | 40.4                 | 38.0  | 41.5 | 43.1           |
| Other         |                              |   |                      |       |      | 39.1           |
| Bus           |                              |   |                      |       |      | 22.3           |
| Taxicab       |                              |   |                      |       |      | 6.6            |
| VIATrans      |                              |   |                      |       |      | 8.3            |
| Car Driver    |                              |   |                      |       |      | 14.6           |
| Car Passenger |                              |   |                      |       |      | 39.1           |

SOURCE: Transportation Coordination Team, p. 22.

NOTE: More than one mode of transportation is used by some mobility impaired persons.

### Mode by Disability

About half of the wheelchair users travel as car passengers (see Table 16). The mode used least by the wheelchair users is a bus. Persons using mechanical aids travels 47.2 percent of the time as car passengers. About 7.7 to 18.5 percent of the respondents travel as drivers of cars.<sup>27</sup>

Crain and Associates identified modal preferences by disability. According to its Washington, D.C., study, wheelchair users tend to drive a car more than nonwheelchair users. Fifty-eight percent of the people in wheelchairs drive, while 19 percent of nonwheelchair users drive. The study also shows that "persons using a walker or a wheelchair or requiring the assistance of another individual were more likely to travel as an automobile passenger than by any other means."<sup>28</sup> The local TCT study reveals only 13.3 percent of wheelchair users actually drive.<sup>29</sup> Although findings differ, there is an indication that mobility impaired persons travel more in cars as either drivers, or passengers, than is generally believed. The CBO report points out that though, "this means that the handicapped are often forced to schedule their journey to accommodate those who drive them, making this mode of transportation sometimes relatively inconvenient."<sup>30</sup>

## CHAPTER III

### CITIZEN PARTICIPATION

#### National Disabled Activism

Helen Meir, United Cerebral Palsy Association in San Francisco, researched the history of "public transit provisions for disabled persons who are 'transit disserved.'" In her report "Accessible Public Transit: A History and Overview of Accessible Transit Provisions in the United States," she says:

By studying the various interest groups involved and tracing the evolving interaction among these groups, patterns emerge that account for the inadequacy of the transit available to the disabled.<sup>1</sup>

Meir informs us that, "In 1980, there were still few if any locations in the U.S. where all subgroups of disabled persons had anything approaching adequate transportation." Public transportation providers were not considered responsible for the provision of service to the disabled. The lack of service stimulated disabled activists to influence transportation policies and practices. According to Meir, this had an "unfortunate side effect"--it "deterred planning and service delivery by clouding the study of existing systems and pilot

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buses. It began one of the country's first automated fare collection systems called FAIRSHARE. Plastic cards were issued to users, and through a billing system, agencies paid part or all of their client's transportation provided by the Valley Transit District.<sup>12</sup>

In 1965, UMTA initiated its 16(b)(2) Program. Non-profit private organizations were able to apply for funds to purchase vans for the transportation of elderly and handicapped clients. The government would provide 80 percent of the capital cost, and the other 20 percent had to be matched locally. In 1975, \$21 million was allocated to metropolitan areas for vehicles under Section 16(b)(2).<sup>13</sup> By 1982, approximately \$25 million was dedicated to the program. Texas will receive 4.75 percent of it which translates into about forty-four vehicles.<sup>14</sup>

The AOA of the Department of Health, Education and Welfare also provided transportation assistance on the local and state levels. AOA was authorized to conduct transportation research and demonstration programs for the elderly and handicapped under Titles III and IV of the Older Americans Act, and under Title VI of the 1935 Social Security Act.<sup>15</sup>

In 1976, Arthur Saltzman, at the North Carolina A&T S



transportation. The California Governor's Commission in 1965 identified the lack of transportation as a barrier to employment of the poor. Transportation demonstration programs began in several metropolitan areas. Demand-responsive systems picked up poor people to transport them to places of employment. Some of these programs were considered a boost to employment, and other HUD sponsored demonstration programs died from lack of ridership.<sup>10</sup>

Other agencies administering health and social or recreational activities to the poor received federal transportation assistance also. Dial-a-ride services under the Model Cities program agencies were initiated in Columbus, Ohio; Grand Rapids, Michigan; and Buffalo, New York. Rural areas received these demonstration grants to help poor residents meet their transportation needs. The Office of Economic Opportunity (OEO) was instrumental in managing the programs. By 1972, OEO had funded over fifty rural transportation programs.<sup>11</sup>

UMTA and the HEW Administration on Aging (AOA) provided support to transportation programs for the elderly and handicapped in the late sixties also. In Naugatuck Valley Connecticut, a lift-equipped system began with several small

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transit operator to provide these services.<sup>7</sup> The 1981, Regulations encouraged the use of private carriers as much as possible to provide more service to the elderly and handicapped.<sup>8</sup>

### Agency Transportation Programs

The federal government began funding human service agency programs for transportation services in the late sixties. The regulations designed to provide accessible public transportation to the mobility impaired were not developed yet. The human service organizations administered educational rehabilitative, employment, and social or recreational programs to the poor, elderly, and handicapped. Public transportation was not accessible or available for many of the agencies' clients due to their low incomes, disabilities, or lack of bus service in their low density areas. The agencies applied for federal assistance to operate transportation programs to clients of their agencies for specific trip purposes. The people who could use these transportation services had to be part of the agency's program which usually covered only a certain geographic area.<sup>9</sup>

The Department of Housing and Urban Development (HUD) was the first federal agency to commit public funds for agency

uncoordinated, and unorganized."<sup>3</sup> He goes on to say that most paratransit providers are

'Mom and Pop' operators with limited capital resources and limited management expertise. Preoccupied with their own operations and short-term problems, these operators rarely concern themselves with influencing opinion or policy on a regional, statewide, or federal level.<sup>4</sup>

Not until recently have taxicab companies become interfaced with federal government. Most are nationally established trade organizations (except in Bexar County). Roos says that legislators and policy makers are basically unaware of the needs of paratransit providers because it has no organized constituency.<sup>5</sup>

Human service organizations were the ones who provided the most meaningful paratransit systems. As these human-oriented agencies began cropping up in the sixties, the need for transportation for low income, elderly, and handicapped people became apparent.<sup>6</sup>

Transit operators and taxicab companies took longer to interface with government on paratransit provisions. Recent federal policies have provided new roles for both of them. The Urban Mass Transportation Act (UMTA) of 1976, required special efforts to make transit provisions for elderly and handicapped people. Federal funds could be used by the

## CHAPTER IV

### PARATRANSIT SERVICE DEVELOPMENTS

#### Trends

Paratransit systems are relatively new, unorganized, dynamic and here to stay. Taxicabs were the only paratransit systems in the sixties. In the seventies, paratransit grew out of geographic, economic, physical, and attitudinal needs. The United States was becoming more mobile. People's place of employment and activity shifted from the central cities to the sprawling suburbs. Car ownership increased. The trend was to be more mobile--for the young, old, and handicapped.<sup>1</sup>

Paratransit vehicles were ideal because they could access low density areas along major traffic corridors. Paratransit helped people to travel to areas other than to the central business district. It could transport people who could not ordinarily walk to a bus stop because of their physical limitations. These were the economic needs and social norms of the times.<sup>2</sup>

Daniel Roos, Massachusetts Institute of Technology, writes that "paratransit does not have well-organized vocal constituencies. Rather, the paratransit sector is fragmented,

<sup>14</sup>Ibid.

<sup>15</sup>VIA Metropolitan Transit, "Handicapped and Elderly Transportation Equipment" (San Antonio, Tex.: Metropolitan Planning Organization, 1979), p. 5. (Mimeographed.)

<sup>16</sup>San Antonio Metropolitan Transit Authority, "'METRO Fact Book" (San Antonio, Tex.: SAMTA, 1977), p. 2. (Type-written.)

<sup>17</sup>Rodriguez Interview, 11 May, 1982; Thomas C. Hood, et al., Transportation Services for the Transportation Disadvantaged (Washington, D.C.: National Cooperative Highway Research Program Project 8-16, 1978), p. 103.

<sup>18</sup>VIA Board of Trustees, VIA Metropolitan Transit, Planning Department, Transition Plan for VIA Metropolitan Transit Program Accessibility, Resolution 6-12-80-1, San Antonio, Texas, Appendix B. (Mimeographed.) Hereafter, referred to as "Transition Plan."

<sup>19</sup>"Transition Plan," pp. 9-17, Appendices A-H.

<sup>20</sup>Grants/Planning Department, "Special Transit Service Options Report" (San Antonio, Tex.: VIA Metropolitan Transit, 1982), p. I-2. (Typewritten.) Hereafter referred to as "Options Report."

<sup>21</sup>U.S., Department of Transportation, Federal Register "Nondiscrimination on the Basis of Handicap; Interim Final Rule and Request for Comments," 20 July 1981, p. 37488.

<sup>22</sup>VIA Board of Trustees, VIA Metropolitan Transit, Resolution Adopting Special Services Advisory Committee's Recommendation and Acknowledgment of the VIA Transition Plan Being Voided. No. 05-25-82-01, San Antonio, Texas, 1982.

Board of Trustees that paratransit services (VIATrans) provided the most cost-effective and efficient type of transportation for the elderly and handicapped.<sup>22</sup>

#### Footnotes

<sup>1</sup>Helen Meir, Accessible Public Transit: A History and Overview of Accessible Transit Provision in the United States (San Francisco, Calif.: United Cerebral Palsy Association, 1981), pp. 5-6.

<sup>2</sup>Ibid., p. 5.

<sup>3</sup>Ibid., pp. 7-8.

<sup>4</sup>Ibid., p. 8.

<sup>5</sup>Ibid.

<sup>6</sup>Ibid., p. 9.

<sup>7</sup>Helen Meir, p. 8 quoting Frank Bowe, Jan E. Jacobi and Lawrence D. Wiseman, Coalition Building, American Coalition of Citizens with Disabilities (Washington, D.C.: n.p., 1978), p. 25.

<sup>8</sup>Ibid., p. 9.

<sup>9</sup>Helen Meir, p. 9 quoting Sieglindo A. Shapiro, President, Pennsylvania Alliance of the Physically Handicapped, phone conversation, Philadelphia, Pa., June 30, 1980.

<sup>10</sup>Ibid.

<sup>11</sup>Meir, p. 8.

<sup>12</sup>Interview with Rachel Rodriguez, San Antonio, Texas 11 May 1982.

<sup>13</sup>Ibid.

for the Handicapped, Insight, and the ACCD participated in setting the TAC's goals and objectives for accessible transportation.<sup>18</sup> The TAC worked to help VIA develop its local transportation program which outlined a 10-year plan to equip the mainline buses with wheelchair lifts, as per the 1979, 504 Regulation. The transit community was politically divided on the 504 Regulation,<sup>19</sup> and VIA subsequently requested an exemption from it in 1980, as did many public transit operators. The Exemption Request was denied by the secretary of DOT.<sup>20</sup>

In 1981, Section 504 was amended, so that operators were no longer required to lift-equip buses. A federal court ruled that the 1979 Regulation was too costly as an affirmative action effort. Consumers, transportation agencies, and statistics nationwide attested that few trips were actually provided to the handicapped by lift-equipped bus systems.<sup>21</sup> The TAC subsequently evolved into the Special Services Advisory Committee (SSAC) and assumed the task of Local Option.

It was now up to the local transit community to determine the type and level of transit provisions for the handicapped. All 10-year plans for lift-equipped buses were voided by DOT. In May, 1982, the SSAC recommended to the VIA

the Urban Mass Transportation Act of 1976. In the settlement, the San Antonio Transit System agreed to provide special services for the elderly and handicapped. Soon thereafter, a rehabilitation facilities contracted to provide the service.<sup>14</sup>

The rehabilitation facility provided the special transportation services until the transit system assumed direct management for it in 1979,<sup>15</sup> by which time it had become established as VIA Metropolitan Transit--a region-wide transit carrier.<sup>16</sup> Rodriguez and a national study indicate that the disabled consumers had become dissatisfied with the charitable nature and eligibility restrictions imposed by the first provider. Only Medicaid recipients could utilize the system, and priority trip purposes (e.g., medical), were established. Rodriguez and fellow consumers wanted a public paratransit system which allowed all handicapped persons to obtain a ride despite their benefits or trip needs.<sup>17</sup>

In 1979, the VIA Board of Trustees appointed a Transition Advisory Committee (TAC) for citizen participation as per the Section 504 Regulations. It consisted of elderly and handicapped consumers, advocates, and agency and transportation provider representatives. Co-existing groups, such as San Antonio Handicapped Club, San Antonio Citizens Concerned



her classmates were initially concerned about the lack of accessible public facilities on campus. They believed that many disabled students were excluded from academic, social and recreational opportunities because buildings and activities had not been designed to accommodate wheelchair users.<sup>12</sup>

The student organization also became concerned about the lack of special transportation for students to and from the commuter school. It asserted that if wheelchair students had access to lift-equipped vehicles their educational and employment opportunities would increase. Rodriguez and her classmates negotiated with campus administrators to obtain the first federally funded, lift-equipped vehicle for San Antonio College.<sup>13</sup>

Rodriguez's concern continued after her college studies. She and several other women formed Fighters Against Barriers in 1973. Its primary focus was on accessible public transportation, as well as on education and employment. In 1976, Fighters Against Barriers initiated a class action suit against the transit system. The plaintiffs held that the public operator was not providing special services for elderly and handicapped people who could not otherwise utilize conventional buses and was therefore in noncompliance with

they realized that the only way to solve this problem was to address it on a national level or make it a national issue and join forces with other disabled and elderly groups. They felt that in terms of rights and laws their priority was to make publicly funded transit systems accessible to elderly and handicapped people.<sup>9</sup>

The three groups organized with others to address accessible transportation and became known as the Transbus Group. The group is significant because it was one of the first to work on both elderly and handicapped issues. Over five million people were represented. The Transbus Group worked toward the design of vehicles accessible to the elderly and handicapped and advocated three approaches: (1) total access to mass transit; (2) feeder systems; and (3) small paratransit vehicles for those who cannot use accessible fixed-route systems.<sup>10</sup> By the mid-seventies, the disabled had organized. They had formed about 2,500 coalitions and had experienced some success in lobbying for more just treatment in education, employment, housing, and transportation.<sup>11</sup>

### Local Disabled Activism

The college campus appears to have also been a focal point for several handicapped students' concern in San Antonio. In the early seventies, Rachel Rodriguez, a wheelchair student, founded the Handicapped Student Organization. Rodriguez and

the American Coalition of Citizens with Disabilities (ACCD). The ACCD represented cross-disabilities for the first time. It supported the independent living concept for disabled persons to do for themselves. The Coalition's efforts to unite people with different disabilities were difficult.<sup>6</sup> Meir recalls:

At the time, most individuals--indeed most groups--did not recognize that cross-disability cooperation was necessary, or even feasible. Issues that required joint action remained just out of sight; but when they surfaced, people tended to view them from a variety of perspectives, and organized along disability lines.<sup>7</sup>

In addition, there was a resentment against social service personnel who administered most organizations for the disabled. Agency cooperation was hard to achieve; however, the ACCD obtained one of its first grants from the Rehabilitation Services Administration.<sup>8</sup>

In 1973, the Disabled in Action in Pennsylvania, focused its attention on transportation. A year later, it joined with the Moss Rehabilitation Center and the local United Cerebral Palsy Chapter to work with the Southwest Pennsylvania Transit Authority on transit problems. One of its founders, Sieglindo Shapiro, said that as the members began to look at transit related issues,

Berkeley in 1962. He resided in the campus hospital. By 1966 eleven more disabled students had joined him in an effort to establish a support system for other students. Roberts and his classmates believed that an attitude of helplessness and dependency had been fostered among disabled people. Paternalism was a violation of human dignity. Support services for the disabled should be designed and run by disabled persons who could live independently in the community. Together, the students founded the first Center for Independent Living.<sup>4</sup>

The spirit of autonomy grew among the disabled in other parts of the country too. In New York, the Disabled in Action Committee lobbied for a woman who was denied her teaching certificate because she could not pass the physical exam, although she had completed the academic requirements. In November, 1973, the disabled in New York held sit-ins at Nixon's Campaign Headquarters, and marched in Times Square just days before his election. Other political networks held similar demonstrations in California and Boston. President Nixon vetoed the Rehabilitation Act twice--Nondiscrimination of the Handicapped in Federal Assisted Programs. The vetoes had been upheld by Congress.<sup>5</sup>

The hundred and fifty national advocacy leaders formed

projects with emotions that biased their analysis."<sup>2</sup>

Meir views the disabled as "a smaller and less visible minority than the black or feminist movements;" however, she does not disregard their collective impact. "They have become a strong and vocal political group that has succeeded in making incredible strides in one decade." Many of the activists had been youngsters who grew up in the forties and fifties when accessibility was not an issue. It was an accepted tenet that they did not belong in the mainstream of society. For instance, laws existed whereby children were required to attend school, but there were no mandates that handicapped children had to attend school. In the sixties, these children were placed in special schools, tutored at home, or institutionalized. At the college level, Meir remembers that only a "handful of universities were accessible" to the disabled. By the late sixties and early seventies, thousands of disabled students began entering high schools, colleges and universities. The new spirit of autonomy of the disabled began to grow on a few university campuses.<sup>3</sup>

Ed Roberts, Director of the California Department of Rehabilitation, and a post-quadruplegic, was the first severely disabled person admitted to the University of California at

University Transportation Institute, researched the amount of federal funds being provided to human service organizations in the United States. In 1976, he estimated that \$500 million was being spent on transportation programs run by human service organizations. About nine hundred million has been estimated for 1982 based on a formula provided by Saltzman.<sup>16</sup>

Historically, transit services provided by agency administrators are costly and inefficient. These programs were not started by transportation planners, and a "seat-of-the-pants approach" was used. Agencies obtained government surplus vehicles and used unemployed drivers or volunteers to drive them. A preventive maintenance program was not developed, and vehicle repairs were usually performed by local garages. The availability of vehicles was not assured.

Saltzman says that,

It is very easy to be critical of the poor planning and management exhibited by most of these systems. They are fragmented and relatively costly on a per passenger trip basis. But these operations have provided door-to-door services that have had significant positive impact on their passengers.<sup>17</sup>

### Private Carriers

Taxis have traditionally provided transportation to the elderly and handicapped, but they were not organized, managed

Each cab is equipped with a two-way radio. There are no restrictions on trip purpose or destinations. Reservation can be made at any time of the day on a first-come, first-serve basis unless reservations are made through VIAtrans. Advance reservations are usually not possible.<sup>21</sup>

Trips can be on a rideshare and timeshare basis which lower costs on a group basis. Currently, the minimum charge is \$1.45 for the first mile and \$.20 per additional 1/3 mile. Up to four persons may share a ride for the same fare which would otherwise be charged to the individual person for a non-shared ride. Average trip cost is \$6.00 one-way.<sup>23</sup>

Though taxis are private carriers, public accountability exists. The City Council issues twenty-five year franchise contracts "with one-year contracts available." The City Council also has input in the taxicabs' fare structure. The City Manager may limit the number of taxicab vehicles within the city. Currently, the authorized number of vehicles is 481. The names of all the taxicab companies and the number of vehicles they have are shown in Table 21.

#### Human Service Organizations

In the Fall of 1979, VIA Metropolitan Transit conducted a survey of ninety-two human service organizations in San

unloading or escorting passengers.<sup>12</sup>

### Private Carriers

In San Antonio, approximately 32 taxicab companies are licensed by the City of San Antonio to operate 391 taxicabs with 289 vehicles actually able to operate. Two of the larger taxicab companies are Checker and Yellow Cab each with over 100 vehicles. They operate 24-hours a day, seven days a week in Bexar County.<sup>18</sup>

Locally, taxicab companies are becoming more of a recognized provider of transportation to the elderly and handicapped. As mentioned before, about 40 percent of all VIAtrans rides are provided by taxis. For many elderly and handicapped persons, the taxicab is a preferred mode of transportation. Travel and waiting times are reduced. Costs can be reduced, particularly if trips are subsidized.<sup>19</sup>

Each cab accommodates about four passengers. Persons who can transfer from fold-up wheelchair may store it on the backseat or in the trunk with the assistance of the driver. Many drivers dispatched to pick up elderly and handicapped persons have experience transporting the mobility impaired, and some will provide door-to-door assistance with prior notice.<sup>20</sup>



Approximately six trip requests per day cannot be accommodated by VIAtrans which is about 2.0 percent of all trips provided. Peak hour requests are in the greatest demand. Trip numbers vary greatly season to season with a decrease in early winter and early summer months. Monthly ridership levels range from a low of 6,000 to a high of nearly 11,000 per month. Productivity was about 1.6 persons per hour in the start-up months and has increased to about 2.0. The ideal productivity level for paratransit is 2.0. Productivity is vulnerable to trip cancellations. As many as 250 trips per month have been recorded by VIAtrans, but these are now decreasing since consumers and VIAtrans staff have consciously worked toward avoiding unnecessary trips.<sup>15</sup>

The most common complaints heard about VIAtrans are either the trip length and/or late pick-ups. Unfortunately, according to Francis Navin in his article, "Productivity of Vehicle Transport for the Elderly and Handicapped," these two traits are inherent in demand-responsive systems nationwide.<sup>16</sup> The most common complaints made by passengers before VIA assumed management of VIAtrans were lateness and trip length. Late pick-ups usually range from 5 to 30 minutes. Vans get held up in rush-hour traffic, accidents, weather, and

to accommodate 50,000 to 70,000 mobility impaired persons on a regular basis in Bexar County though, operating costs would exceed \$10 million at the current rate. Of course not everyone would need to use it.<sup>10</sup>

The average trip cost is about \$8.00 and accounts for both van and taxi usage. The average van cost is \$11.50 per one-way trip, and a one-way taxi trip is about \$6.00. These costs include driver's salary, administrative staff, fringe benefits, indirect costs, maintenance, and fuel.<sup>11</sup>

VIA recovers 50 cents per one-way passenger trip with the exception of attendants who ride free. Less than one percent of the costs are ever reimbursed from human service agencies at this time. Only one agency has a reimbursement agreement with VIA to pay for some of its clients' transportation.<sup>12</sup> Local funds are received from the half-cent sales tax levied on citizens within the VIA service area.<sup>13</sup>

All trips are scheduled and routed as tightly as possible by the VIAtrans' operation staff. Ride-sharing and time-sharing are encouraged. The average trip length is four to seven miles, and the average travel time ranges from 15 to 30 minutes.<sup>14</sup>

support of family, friends, and aides in the community whenever possible.<sup>5</sup>

For those mobility impaired persons who work or attend school regularly, subscription service may be available. Dialysis patients, for example, are common subscribers to VIAtrans. Taxis usually transport these ambulatory passengers. Taxis are less costly to utilize, and most registrants can physically use them. Taxis are relied upon in a contractual basis about 40 percent of the time.<sup>6</sup>

Since VIA assumed management of VIAtrans in August 1979, there has been a 153 percent increase in registrants qualified to utilize the service. Approximately one-third of all registered patrons utilize VIAtrans on a regular basis; however, there has been no formal analysis of the rate of patron usage up to this time.<sup>7</sup>

It appears evident that VIAtrans serves from 2 to 8 percent of the mobility impaired population in San Antonio-Bexar County except for the small area VIA does not serve. Its 1982 operating budget is \$908,522, and more than 8 percent of VIA's UMTA Section 5 funds are utilized.<sup>8</sup> In 1981, the federal guidelines recommended only 3.5 percent of a system's Section 5 funds be spent on operations.<sup>9</sup> In order

A.M. and 3:00 P.M. to 5:00 P.M.) approximately 11 to 13 vans operate. The other 12 to 14 vans are either being serviced, repaired or maintained as a spare ratio required by transit for back-up.<sup>3</sup>

Each van is equipped with a side-door lift which accommodates wheelchair users. The bubbled top vans each accommodate three wheelchair tie-downs and seatbelts. Each has five seats for non-wheelchair users (e.g., elderly, blind, mentally impaired). Each van is equipped with a two-way radio, extra low boarding steps, a first aid kit, and a spotlight.<sup>4</sup>

The van operators are the most valuable resource to VIAtrans. Men and women trained in passenger assistance techniques and sensitivity training awareness assist elderly and handicapped people in and out of the vans. They provide emergency treatment when called upon. In special approved instances, the driver provides door-to-door service, but this is discouraged. A system's productivity (the number of passengers transported per hour) can be devastated by relying on door-to-door service. It causes longer trip times for passengers. Attendants and/or traveling companions are able to ride free, thus passengers are encouraged to utilize the

## CHAPTER V

### EXISTING LOCAL TRANSPORTATION RESOURCES

#### Public Transit Operator

VIA Metropolitan Transit provides transportation to the mobility impaired residents in its service area. Its service area serves approximately 99 percent of Bexar County. Any city may vote itself into the service area by public referendum in order to obtain VIAtrans service.<sup>1</sup>

Approximately 4,300 mobility impaired persons are registered for VIAtrans service. A physician or designated human service organization (e.g., Easter Seals, United Cerebral Palsy, etc.) must certify that a person is mobility impaired to be eligible for service. A person may schedule his ride as early as seven days in advance to as late as two hours in advance, space available. Most trips are accommodated when 24-hour notice is given.<sup>2</sup>

The fare is 50 cents for a one-way trip (\$1.00 round trip). There is no restriction on where a person may travel to, or for what purpose they choose to travel, as long as it is in the VIA service area. The system operates 16 hours a day, seven days a week. During peak hours (7:00 A.M. to 8:30

16 Ibid.

17 Ibid.

18 Roos, pp. 142-43.

19 U.S., Department of Transportation, p. 37494.

20 Roos, p. 145.

21 Daniel Roos, "Demand-Responsive Transportation,"  
Public Transportation: Planning, Operations, and Management  
(Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979), p. 163.

22 Roos, "Demand-Responsive Transportation," pp. 159-  
60.

23 Ibid., pp. 162-63.

24 Ibid.

25 Roos, "Paratransit," p. 145.

26 Roos, "Demand-Responsive Transportation," pp. 162-  
63.

implemented. Maintenance is improving with better vehicle design and experience. Productivity is increasing with group rides and coordination among agencies.<sup>26</sup>

### Footnotes

<sup>1</sup>Daniel Roos, "Paratransit," Public Transportation: Planning, Operations, and Management (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979), pp. 142-143.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 144.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

<sup>6</sup>Arthur Saltzman, "Providing for the Transportation Disadvantaged," Public Transportation: Planning, Operations, and Management (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979), p. 575.

<sup>7</sup>Roos, p. 144.

<sup>8</sup>U.S., Department of Transportation, p. 37494.

<sup>9</sup>Saltzman, pp. 572-75.

<sup>10</sup>Ibid., p. 573.

<sup>11</sup>Ibid., pp. 574-75.

<sup>12</sup>Ibid., pp. 573-75.

<sup>13</sup>Ibid.

<sup>14</sup>Leonard A. Eiserer, ed., Public Transit Report (Maryland: Business Publishers, 1982), p. 31.

<sup>15</sup>Saltzman, p. 576.

to them. Vehicles had high maintenance costs and a life-span of 60,000 to 100,000 miles or about three years. Productivity was limited. Some operators feared that this sort of system would cause a shift in its fixed-route ridership to its paratransit systems. Operational costs concerned them. Unionized drivers with fringe benefits were expensive--"59 to 100% greater than for a nonunionized operation." Work rules oriented toward regular line service might constrain demand-responsive systems.<sup>24</sup>

Newer developments show that transit operators have improved their operations and will stay competitive. The American Public Transportation Association (APTA) was a leader in promoting paratransit services among transit operators. An APTA paratransit task force in 1976 concluded:

Our cities with their varied forms require a mixture of conventional transit, and paratransit, providing a family of services that can be designed or shaped to fit market needs of a particular portion of the community.<sup>25</sup>

In Ohio, the Greater Cleveland Regional Transportation Authority and its labor union proposed "different labor arrangements for demand-responsive services, featuring lower wage rates, use of part time personnel, and more flexible work rules." Computerized scheduling and routing systems have been



8. Varied productivity. Productivity ranged from about five to twenty passengers per vehicle-hour. "Hybrid" systems (deviation from fixed-routes) carried more people-- 10 to 20 per hour--and flexible systems (demand-responsive) carried five to ten people per hour.

9. Varied economics. Lower fares were due to non-union drivers. None of the systems were designed to break even.<sup>22</sup>

The demand-responsive systems continued to grow and were especially popular in rural areas, towns, and small cities. By 1973, demand-responsive systems had developed into larger systems with more than ten vehicles per system in larger metropolitan areas, such as Regina, Saskatchewan; Ann Arbor, Michigan; Santa Clara, California; and Rochester, New York. Where demand-responsive systems had been formerly implemented in areas without any transportation service, later systems were developed in areas where fixed-route bus service was available. Forms of automation began to come about to improve scheduling and routing.<sup>23</sup>

Transit operators encountered several problems. Many were oriented toward providing only conventional bus transit. Paratransit management and operational systems were foreign

of their characteristics:

1. Small-scale systems. Ten vehicles or less were utilized in areas with less than 20,000 persons.
2. Manual dispatching. Riders were scheduled by hand.
3. Flexible operations. Non-unionized personnel were utilized. Work rules were limited, and wages were low.
4. Different services. Services were provided during, before, and after peak hours. Variations of services were implemented--many origins to many destinations, fixed-route, small vehicles, scheduled group pick-ups with common destinations, and so on.
5. No transit service. Sometimes the service replaced fixed-route service in areas with low ridership, but it usually served areas where bus service was nonexistent.
6. Low fares. Cost per trip ranged from 25 to 50 cents.
7. Increased ridership. Demand responsive systems increased ridership when fixed-route service in the same areas had low ridership. The percentage increase was significant, but since van capacity was limited, only a small number were actually transported.

were underway, some transit operators preferred that the taxicab company provide the areas' demand-responsive system. The taxicab companies' labor costs were as much as 50 percent less than the transit operator's; they had "more flexible work rules; and an incentive pay scale for drivers to improve productivity." Some of the taxicab companies have installed lifts on these vehicles like in Westport, Connecticut.<sup>21</sup>

#### Demand Responsive Systems-- Transit Operators

In the mid-sixties, the federal government made several studies in an effort to determine alternatives between exclusive ride taxis and fixed-route schedules because ridership was decreasing. The dial-a-bus service concept emerged, and these service requests were scheduled and dispatched. High computer and communications technology for dispatching began. Dial-a-ride studies were conducted at the Massachusetts Institute of Technology, General Motors Corporation, and the Institute of Public Administration. The studies determined that dial-a-bus was a family of various transportation systems which developed wide range of services. In 1969, the first demand-responsive system was initiated. A hundred or so followed during the next several years. Roos identifies nine

or recognized as major providers of transportation to the elderly and handicapped by government. Services were considered expensive and impersonal. It has only been recently that taxis have been acknowledged and appreciated.<sup>18</sup> As the federal regulations on transportation for the elderly and handicapped evolved in the seventies, private carriers received a little more attention as a viable resource for elderly and handicapped transportation.<sup>19</sup>

Roos cites several events which altered the taxicabs' former uninvolvedness. The costs of gas and rising inflation without fare increases affected operations. Small van service for the poor, elderly, and handicapped, initiated by the public service agencies and transit operators, competed for their business. "They felt that publicly subsidized companies should not provide taxilike service, or that the taxi company should also be subsidized." UMTA began providing operating assistance in 1974. "While the benefits of capital assistance to the taxi industry were debatable, the benefits of operating assistance were clear cut." Several strong, vocal taxi leaders began arguing that the industry should explore new shared ride paratransit service opportunities.<sup>20</sup>

In the early seventies when demand responsive systems

TABLE 21

## LICENSED TAXICAB COMPANIES, BEXAR COUNTY, 1981

| Taxicabs<br>Company | Number Taxicabs<br>Authorized to<br>Operate | Actual Number<br>Taxicabs Available<br>To Operate |
|---------------------|---|---|
| A A                 | 2   | 2   |
| ABC                 | 2   | 1   |
| ACE                 | 2   | 1   |
| Alamo City          | 2   | 1   |
| Airline             | 1   | 1   |
| Airport             | 1   | 1   |
| Arrow               | 1   | 1   |
| B & B               | 8   | 8   |
| Bexar               | 2   | 2   |
| Black Cab           | 4   | 4   |
| Checker             | 135   | 95  |
| City                | 10  | 10  |
| City Wide           | 1   | 1   |
| County Wide         | 1   | 1   |
| Diamond             | 6   | 5   |
| Downtown            | 5   | 1   |
| Eagle               | 3   | 2   |
| Express             | 5   | 2   |
| Hernandez           | 5   | 2   |
| J B                 | 1   | 1   |
| Jetline             | 3   | 2   |
| J V                 | 1   | 1   |
| Krammers            | 1   | 1   |

## Footnotes

<sup>1</sup>VIA Metropolitan Transit, "Transition Plan: Update," p. 1.

<sup>2</sup>Interview with Wanda Dyer.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>VIA Metropolitan Transit, "Transition Plan," pp. 70, 82.

<sup>6</sup>Interview with Wanda Dyer.

<sup>7</sup>Ibid.

<sup>8</sup>Ibid.

<sup>9</sup>U.S., Department of Transportation, Federal Register 20 July 1982, p. 37489.

<sup>10</sup>Interview with Wanda Dyer.

<sup>11</sup>Ibid.

<sup>12</sup>Ibid.

<sup>13</sup>VIA Metropolitan Transit, "Transition Plan," p. 1.

<sup>14</sup>Interview with Wanda Dyer.

<sup>15</sup>Ibid.

<sup>16</sup>Francis P. D. Navin, "Productivity of Vehicle Transport for the Elderly and Handicapped," Transportation Planning and Technology 5 (September 1979): 104.

<sup>17</sup>Interview with Wanda Dyer.

<sup>18</sup>Alamo Area Council of Governments, "Mobility Impaired Service Delivery Plan Update," (San Antonio: Metropolitan Planning Organization, 1979), pp. 32-33, Section B.

length. Ideas have been suggested in favor of discount taxi coupons provided by agencies since these trips are usually less than van trips. Group-shared rides can lower fare and should be encouraged whenever possible.

Agencies should perhaps try to obtain user fees whenever possible in order to recover at least some public funds to support the service. More transportation service could be provided if more costs were recovered.

Transportation is a primary purpose of VIAtrans and taxicabs, whereas human service organizations' primary function, is to provide employment, educational, health and social recreational services to the elderly and handicapped. Because of their priorities, little money is spent on management of the transportation systems. Management is not efficient when record keeping, scheduling, routing, maintenance, and other things are performed on an informal basis. If little time is spent looking for bargains, the buyer will invariably end up paying more. For example, in the 92-Agency Survey, it was learned that one provider's van broke down one day so another one was leased for two days for several hundred dollars. Perhaps another agency could have helped out if prior arrangements had been made.

mobility impaired are associated with an agency. Nonaffiliated people must rely on VIAtrans and taxis at this time.

Agency clients sometimes use VIAtrans and taxis on their own accord when their agency does not have space available, does not permit certain trip purposes, or may not be operating at needed times. For many reasons, agency clients utilize VIAtrans and taxicabs, though persons not affiliated with agencies may not use agency vehicles.

Only VIAtrans and taxicabs provide daily service, the latter operating 24-hours a day. The taxicabs have been important to many handicapped people for medical emergencies or a crisis in the middle of the night. There has been concern that among all agencies, over a hundred vehicles are idle in the evening hours and on weekends. Perhaps the demand does not exist.

Cost for VIAtrans is a reasonable fare of \$.50, and the government heavily subsidizes the remainder. In reality, the passenger pays no more than 7.7 percent of the total cost of the ride. Most people want to pay something for a service even when they are poor, as a matter of dignity. Taxicabs can be expensive for poor persons if they do not schedule through VIAtrans, in which case they would pay \$.50 regardless of tri



TABLE 25--Continued

|  | VIA-<br>trans | Taxi-<br>cab | Social<br>Service<br>Agencies |
|--|---------------|--------------|-------------------------------|
| Public Funded with<br>Local, State, and<br>Federal Funds | Yes           | No           | Most                          |
| Centrally Dispatched<br>by Two-way Radios                | Yes           | Most         | Few                           |
| Driver Training<br>Provided                              | Yes           | Few          | Few                           |
| Bulk Fuel Procurement                                    | Yes           | Some         | Few                           |
| Special Equipment for<br>Mobility Impaired               | Yes           | Some         | Few                           |
| Paid Drivers (Union)                                     | Yes           | No           | No                            |
| Paid Drivers (Nonunion)                                  | No            | Yes          | Some                          |
| Volunteer Drivers  | No            | No           | Some                          |

SOURCE: Adapted from Alamo Area Council of Government, "Service Delivery Plan," 1979, pp. 48-49.

get to a bus stop with some spontaneity and flexibility in trip purposes.

The general public has access to VIAtrans if they are mobility impaired, and the taxicabs will pick up any elderly or handicapped person. The human service agencies, however, take care of their own elderly and handicapped clients. Persons have to be affiliated with the services offered by the agencies; however, it is unknown at this time how many

TABLE 25

## EXISTING SERVICE FACTORS

|   | VIA-<br>trans | Taxi-<br>cab | Social<br>Service<br>Agencies |
|---|---------------|--------------|-------------------------------|
| Routes are on a Fixed<br>Schedule                       | No            | No           | Most                          |
| Rides Provided on<br>Demand                             | Yes           | Yes          | Some                          |
| General Public<br>Provided                              | Yes           | Yes          | No                            |
| 7-Day Service Provided                                  | Yes           | Yes          | Few                           |
| Advanced Reservations<br>Required                       | Yes           | Yes          | Yes                           |
| Must Exhibit Certain<br>Special Needs                   | Yes           | No           | Yes                           |
| Fare Charged to Rider                                   | Yes           | Yes          | Few                           |
| Service Provided<br>After 5 P.M.                        | Yes           | Yes          | Few                           |
| Emergency Service<br>Provided                           | Few           | Yes          | Few                           |
| Transportation is Primary<br>Agency Purpose             | Yes           | Yes          | No                            |
| Serve Entire Bexar<br>County Area                       | Most          | Yes          | Few                           |
| Door-to-Door Service                                    | Some          | Yes          | Some                          |
| Personalized Service                                    | Yes           | Yes          | Yes                           |
| Trip Cancellation<br>Required                           | Yes           | Yes          | Most                          |
| 24-hour Service   | No            | Most         | No                            |
| Central Coordinated<br>Maintenance Facility<br>Utilized | Yes           | Most         | Few                           |

Antonio-Bexar County which provide transportation to elderly and handicapped people. It is estimated that 54,117 one-way passenger trips per month were provided by these agencies, or 1,746 one-way trips per day (about 873 round trips). Of these, however, only 19,262 or 35.6 percent were mobility impaired.<sup>39</sup>

AACOG cited an average of \$6.00 for a one-way trip by the agencies in 1979. It estimated that 650,000 one-way passenger trips are provided annually. "This equals to an approximate annual expenditure of \$3,900,000 for the provision of these services. . . ."40

### Comparisons

The Alamo Area Council of Governments provided a list of important service factors to consider when examining the available transportation systems (see Table 25). Most of the providers do not operate their vehicles on any set, fixed-route. Subscription service may be set up with VIAtrans for regular work schedules and agencies for nutrition sites, but most systems operate on a demand-responsive basis. Demand response systems are the most difficult to operate since they require extensive scheduling time by staff, and trips vary daily. Nevertheless, these systems provide persons who cannot

TABLE 24--Continued

21. Client's fees (sliding scale)
22. Contributions/donations (group/individual)
23. Estates
24. Foundations
25. Government grants
26. Private grants
27. Program service fees
28. Public school districts
29. Public support
30. Retail sales
31. Service/work contracts

SOURCE: Alamo Area Council of Governments, n.p.; 92 Agency Survey, VIA Metropolitan Transit, 1980, n.p.

The reported amount of transportation funds budgeted for 1980 by the human service organizations was \$1,605,832. The majority of their monthly expenditures were for operational expenses (\$50,849); maintenance (\$9,818); and administrative support (\$20,454). These totaled \$81,121. The cost of a one-way passenger trip reported by the agencies ranged from a low of \$.19 to a high of \$19.00 per one-way trip.<sup>38</sup>

In September, 1979, the Alamo Area Council of Governments (AACOG) released its study of fifty-six human service organizations. AACOG identified about 173 vehicles in San

Sources reported by twenty-four of the agencies are listed in Table 24.<sup>37</sup>

TABLE 24

FUNDING SOURCES OF TWENTY-FOUR  
AGENCIES, BEXAR COUNTY

Major Sources

1. "4 c's" for Day Care Preschool
2. Action
3. AFDC
4. Bexar Agency on Aging
5. Bexar County
6. CHAMPUS
7. City Revenue Sharing
8. City of San Antonio General Fund
9. Community Services Administration
10. HEW
11. Jewish Social Service Federation
12. Medicaid
13. Social Security Income
14. Texas Department of Human Resources
15. Texas Rehabilitation Commission
16. Texas Department of Corrections
17. Title III, Older Americans Act
18. Title XIX
19. United Way

Others Listed (Nondescriptive)

20. Church contributions

TABLE 23

## AGENCY VEHICLES

| Vehicle Type                         | Number   |
|--------------------------------------|----------|
| Agency Car/Station Wagon             | 30       |
| Personal Vehicle                     | 47       |
| Van (to 15 passengers)               | 61       |
| Coach (16-25 capacity)               | 11       |
| Coach (over 25 passengers)           | 2        |
| Coach (36 passengers)                | 1        |
| Medium School Bus (24-28 passengers) | 2        |
| Bus (41-45 capacity)                 | 2        |
| Pick-up Truck                        | 2        |
| Other                                | <u>2</u> |
| TOTAL                                | 160      |

NOTE: Taxis have not been included.

Unfortunately, the human service organizations lack special equipment capable of carrying wheelchair passengers. Few if any have preventive maintenance programs. No central location for integrated maintenance service exists for most of these vehicles at this time. Few of these agencies have radios to organize hour-to-hour pick-ups or to call for emergency assistance.<sup>36</sup>

The agency survey shows that multiple sources of government funds are utilized by the human service organizations.

The average number of vehicles the thirty-six organizations reported was 3.7 vehicles. The average daily use-time was 4.2 hours. The average number of trip miles was 47.7 miles per vehicle per day, and the average number of one-way passenger trips per vehicle per day was 18.7 (about ten roundtrips). Some trips are group rides, especially the nutrition site programs.<sup>33</sup>

Overall, sixty-seven persons were reported as being paid full-time as vehicle drivers, and twenty-six were paid as part-time operators. Sixty-three persons were volunteer operators.<sup>34</sup>

A breakdown of the types of vehicles used to transport mobility impaired persons by the thirty-six agencies are shown in Table 23. Most of the vehicles are owned by the agencies, and only ten were reported to be leased. The vehicles' age ranged from 2.0 to 4.5 years old at the time of the survey. The total seat capacity of all vehicles reported was 1,570. Only ten vehicles were equipped with lifts--one bus and nine vans. Few of the human service organizations transport persons in wheelchairs. Only one vehicle had a ramp, and nine were equipped with a two-way radio.<sup>35</sup>

sites are located predominantly inside Interstate Loop 410. An even distribution is found in the north, south, and east parts of San Antonio with slightly more in the westside area. Five agencies operate beyond the VIA service area in south and southeast rural areas.<sup>29</sup>

Three quarters of the agencies scheduled their clients' trips in advance, and almost half (44.4 percent) responded to a two to twenty-four hour advance trip request on a space available basis.<sup>30</sup>

More than half of the agency respondents (58.3 percent) have a variety of eligibility criteria for persons to utilize their services--age, income, disability, address, and so on. The remainder of the respondents (41.7 percent) have an age criterion of at least one spouse sixty years and older. This indicates that of the existing human service organizations with transportation service, a great proportion are serving elderly persons.<sup>31</sup>

Nearly half (44.4 percent) of the agencies' vehicles are in demand during morning peak-hours on weekdays, and 61.1 percent are in demand during the noon to 2 P.M. hours. Most do not operate from 10:00 to 12:00 noon; and 19.4 percent operate from 3:00 P.M. to 12:00 A.M. Only two organizations reported that they provide transportation on weekends.<sup>32</sup>



districts, churches, and nursing homes. The order of priority trip purposes made by the clients of these human service organization are shown in Table 22.<sup>27</sup>

TABLE 22  
AGENCY TRIP PURPOSES

|                                    | Percent | Number of Agencies<br>Providing these<br>Trip Purposes |
|------------------------------------|---------|--|
| Nutrition Programs                 | 41.7    | 15   |
| Shopping, Banking Laundromat, etc. | 36.1    | 13   |
| Social/Recreation                  | 33.3    | 12   |
| Medical (nonemergency)             | 27.7    | 10   |
| Education/Training                 | 5.5     | 4  |
| Home-to-Work                       | 5.5     | 2  |

It appears evident that most trip purposes reported were for nutrition programs which are meal sites in different parts of the county, where about 3,000 elderly persons meet on weekdays for social/recreational/health purposes. There are thirty such sites in San Antonio. These same nutrition sites sometime provide transportation for shopping, banking and other social/recreation purposes.<sup>28</sup>

Most of the human service organizations began operating transportation services in the early seventies. The

Antonio-Bexar County. It was a more in-depth survey than had been previously performed by the Alamo Area Council of Governments. The survey interviewed agency administrators and examined operational and financial data. Forty percent of the agencies surveyed reported that they offered direct transportation service to the mobility impaired while 41.1 percent did not. Seventeen agencies (18.9 percent) did not respond to the survey.<sup>25</sup>

Less than a quarter (22.2 percent) of the agency respondents who provide transportation to mobility impaired persons contracted with another organization to provide transportation to the mobility impaired. Less than 10 percent reimbursed the mobility impaired for their transportation expenses. About one-third of the agencies reimbursed staff for providing transportation to the mobility impaired at an average of \$.16 per mile.<sup>26</sup>

More than half (55.6 percent) reported that they did not coordinate their transportation service with another human service organization, and the majority (94.4 percent) did not coordinate with a taxicab company for service. About 14 percent reported they coordinated transportation services with some of the following: hospitals, clinics, VIA, school

TABLE 21--Continued

| Taxicabs<br>Company | Number Taxicabs<br>Authorized to<br>Operate | Actual Number<br>Taxicabs Available<br>To Operate |
|---------------------|---|---|
| Lone Star           | 7   | 5   |
| Maddox              | 1   | 1   |
| Metro               | 2   | 2   |
| National            | 5   | 3   |
| Owl                 | 1   | 1   |
| Pan American        | 2   | 1   |
| P F                 | 1   | 1   |
| Reder               | 1   | 1   |
| River City          | 6   | 5   |
| River Side          | 1   | 1   |
| San Antonio         | 4   | 4   |
| Seven/Eleven        | 2   | 1   |
| Texas               | 5   | 5   |
| Tower               | 3   | 1   |
| Valentino's         | 1   | 1   |
| Victory             | 1   | 1   |
| VIP                 | 1   | 1   |
| White & Blue        | 10  | 1   |
| Yellow              | <u>135</u>                                  | <u>106</u>  |
| TOTAL               | 391   | 289   |

SOURCE: Alamo Area Council of Governments, "Handbook," (San Antonio, Tex.: Metropolitan Planning Organizations, 1981), n.p.; Taxicab Licensing Office of the San Antonio Police Department, October, 1981.

<sup>19</sup>Interview with Wanda Dyer.

<sup>20</sup>Ibid.

<sup>21</sup>Ibid.

<sup>22</sup>Alamo Area Council of Governments, "Mobility Impaired Service Delivery Plan," p. 33.

<sup>23</sup>Interview with Wanda Dyer.

<sup>24</sup>Alamo Area Council of Governments, "Mobility Impaired Service Delivery Plan," p. 32.

<sup>25</sup>Roberta Schwartz, "92-Agency Survey" (San Antonio, Tex., Sponsored by VIA Metropolitan Transit, 1979-80), n.p.

<sup>26</sup>Ibid.

<sup>27</sup>Ibid.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.

<sup>30</sup>Ibid.

<sup>31</sup>Ibid.

<sup>32</sup>Ibid.

<sup>33</sup>Ibid.

<sup>34</sup>Ibid.

<sup>35</sup>Ibid.

<sup>36</sup>Ibid.

<sup>37</sup>Ibid.

<sup>38</sup>Ibid.

<sup>39</sup>Alamo Area Council of Governments, "Mobility Impaired Service Delivery Plan," pp. 35, 42.

<sup>40</sup>Ibid., p. 65.

2. "The appointment of a task force" which consists of the same kind of people as in Florida's Coordination Council.
3. To research agencies' insurance problems.
4. To inventory agencies' transportation resources.
5. To prepare an action plan to assess user needs, funding, and the program schedule.
6. To review and approve all the action plans by the secretary of the State Business and Transportation Agency.<sup>12</sup>

The Los Angeles County Paratransit Coordination Project reported its preliminary findings on an area inventory of services to the Los Angeles County Transportation Commission in 1980. It concluded that coordination "would not be feasible through a centralized, single organization for the entire county;" and that coordination would be better suited "under a decentralized subcounty approach." The report showed that only a few agencies could serve the entire County. Some agencies were operating efficient and cost-effective systems, and others were not. Some of the agencies, the report claimed, would not provide operational and financial information.<sup>13</sup>

In 1981, Assemblyman Walter Ingalls discussed the Social Service Transportation Act with the Transportation Research Board in Washington, D.C. He felt that the state mandate was successful and unsuccessful in some ways. Originally

The law established a Coordination Council to govern policies and practices. The Council is composed "of the secretary of the Department of Transportation, the secretary of the Department of Health and Rehabilitative Services, the secretary of the Department of Community Affairs and Education. Also on the council are representatives of elderly and handicapped citizens appointed by the governor, and the president of the Florida Association of Community Action Agencies."<sup>10</sup> Some of the Committee's responsibilities are to:

1. Assess user needs.
2. Establish goals and objectives.
3. Serve as a clearinghouse for funds and operations
4. Develop rules and procedures.
5. Coordinate the 16(b)(2) applications for federally subsidized vehicles.
6. Approve all coordination programs' plans and provisions for service.<sup>11</sup>

In 1979, Assemblyman Ingalls authored California's Social Service Transportation Improvement Act. It initiated six tasks to be performed over a two year period:

1. The identification of all the agencies' transportation funds, and "any restrictions on the use of these funds."

transportation needs.<sup>6</sup> The newly amended 1981 Interim Regulations reiterate coordination by stating:

Considerable short-term benefit can be derived from the coordination and rationalization of existing resources and services to meet the needs of the elderly and handicapped, including wheelchair users and semiambulatory handicapped persons. Governmental health and welfare agencies and private nonprofit organizations spend substantial sums each year to provide or purchase transportation for their clients, and these resources as well as any reduced fare local taxi service should be considered for inclusion in a local coordinated plan.<sup>7</sup>

### State

To some proponents of transportation coordination, a state law to consolidate "is the most expeditious means to break down state and local level barriers to coordination." Florida and California are the only states which mandate coordination at this time.<sup>8</sup>

Florida believed that agency vehicles were underutilized and duplicating services. In 1979, a law passed saying that all agency funds for handicapped transportation had to "be used to purchase services from coordinated public or private, or private nonprofit providers." Those agencies whose clients could not ride with another agency's clients were exempt.<sup>9</sup>

handicapped people. The regulation states that agencies desiring vans must make every attempt to utilize any approved vehicle in a coordination effort.<sup>3</sup> For example, if a van is not in use, it should be put into use by some agency that needs it.

In 1977, a CBO report to Congress recommended that it take "strong congressional and administrative action to adopt policies on coordination." The DOT Surface Transportation Act of 1978, which assists in nonurbanized areas, "requires maximum feasible coordination with transportation services sponsored by other federal agencies." The OHDS Initiative of the Department of Health and Human Services (HHS) provided subsidies to metropolitan areas for research, technical assistance, and demonstration programs for coordination in an effort to improve management and operating efficiency of transportation systems.<sup>4</sup>

In the DOT Regulations of 1976, special efforts via coordination for elderly and handicapped transportation systems by transit operators was emphasized "as a way of meeting these requirements."<sup>5</sup> The 1979 DOT implementation guidelines went beyond lift-equipping buses and reemphasized transportation coordination as a way of meeting elderly and handicapped



## CHAPTER VII

### COORDINATION POLICIES AND PRACTICES

#### Federal

At the Public Transportation for Disabled People Educational Workshop, sponsored by ACCD in Arlington, Texas, in May, 1982, the following paragraph appeared in its handout to participants:

Historically, the transportation services have been poorly managed, severely restrictive in nature and generally not cost-effective. In the past several years, professionals in the transportation and human resources fields at federal, state and local levels have begun to see the advantages of consolidating or coordinating to some extent those individual programs. Also, as vehicle costs, energy costs, maintenance costs, personnel costs and insurance costs have escalated, social service providers have begun to be more receptive to the concept of coordination.<sup>1</sup>

Efforts to coordinate transportation resources have been mainly at the federal level, though some states and localities have initiated activities. Some of the more significant policies were described at the ACCD Workshop.<sup>2</sup>

Section 16(b)(2) of the 1964 Urban Mass Transportation Administration Act enables private, nonprofit organizations to apply for federal aid in the purchasing of specially-designed vans for the transportation of elderly and

## Footnotes

<sup>1</sup>ACCD, Proceedings of the Public Transportation for Disabled People Educational Workshop (Arlington, Tex.: n.p., 1982), p. 45. Hereafter called ACCD Workshop.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Sandra Rosenbloom, "Barriers to Coordination: Irrational or Valid Objections?," Transportation Research Board 818 (Washington, D.C.: National Academy of Science, 1981).

<sup>6</sup>Ibid., p. 34.

<sup>7</sup>Ray Mundy.

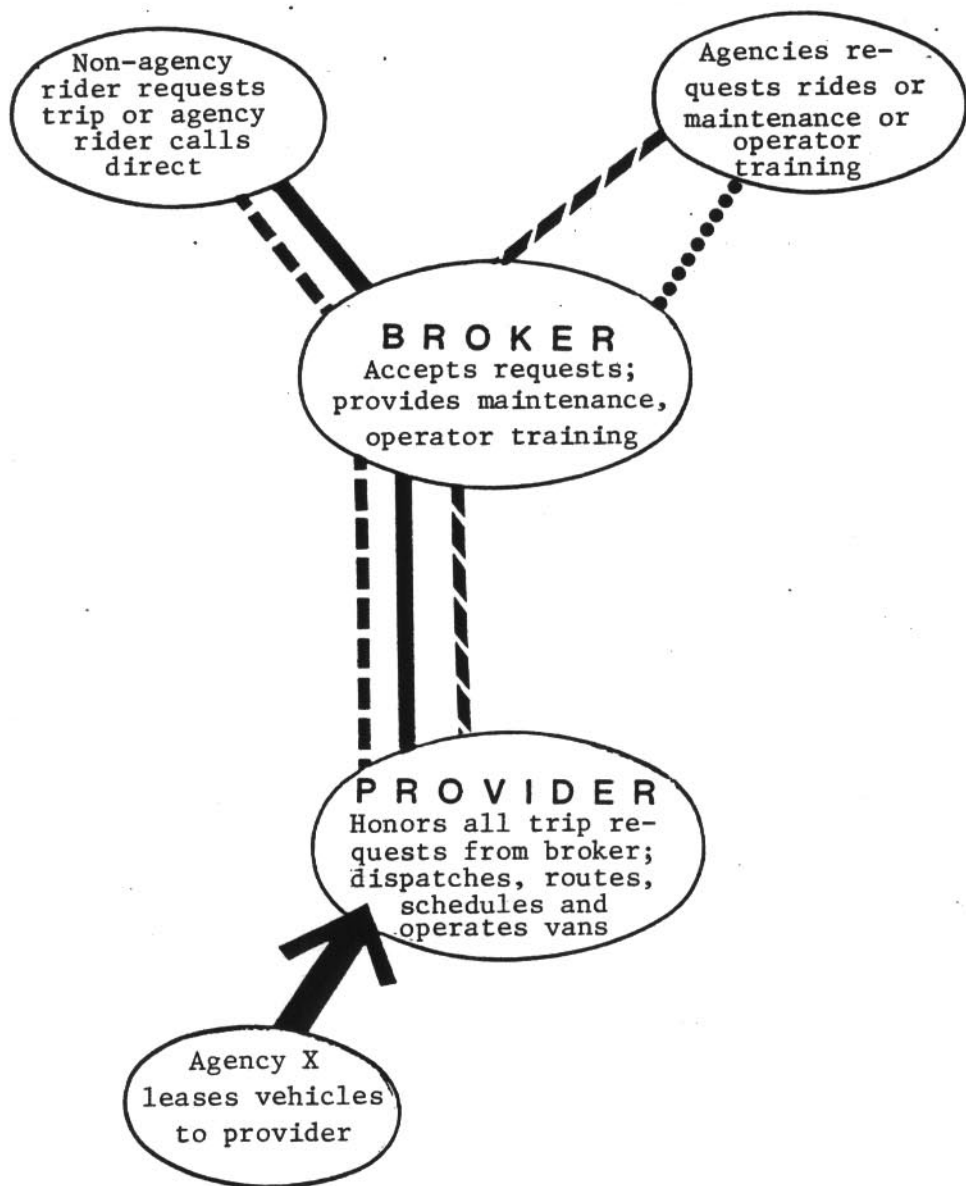


Fig. 5. Example of single provider under brokerage system

needs are met with the appropriate service or program.

The arrangements are quite flexible under the coordinated brokerage concept. For example, the broker may see that all trips are provided by only one agency. The agency, as noted before, may be a private or nonprofit organization, operate for profit or nonprofit and be one agency or several agencies with combined functions. Figure 5 shows how this approach reduces fragmentation further. In this instance, the broker happens to be an agency itself which performs administrative and maintenance functions.

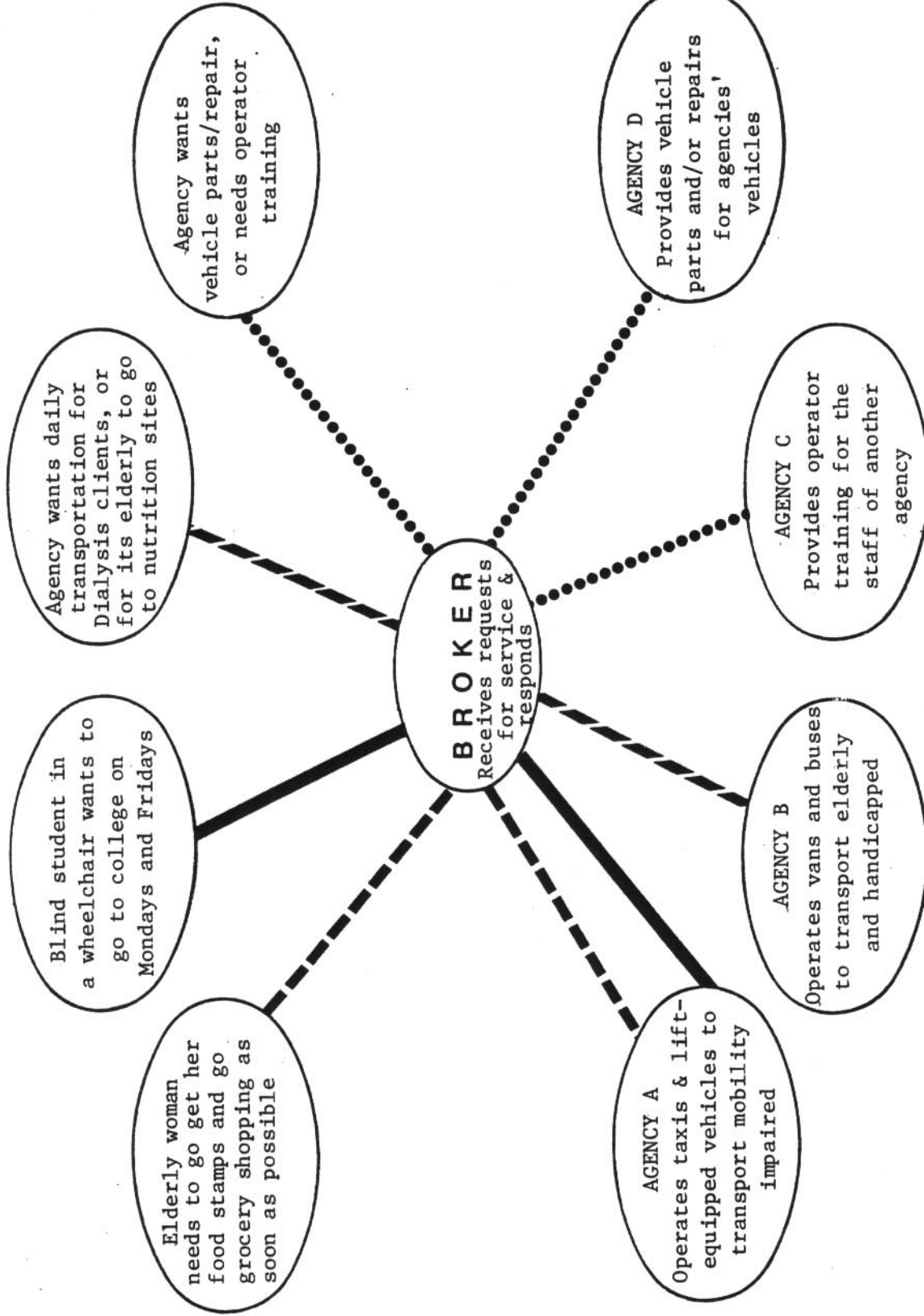
Another example shown in the diagram is an agency which requests transportation for its dialysis patients on a regular basis. Dialysis riders need to undergo expansive blood transfusions as much as three times a week in order to sustain their lives. The broker sees that a reliable mode of transportation is provided for these clients regularly. First, the broker negotiates and contracts with agency B to provide dedicated vehicles on a regular basis. Second, the broker arranges a reimbursement rate with the agency. The agency enters into a contract and distributes color coded coupons to its dialysis patients. Agency B provides regular subscription service to the agency's people. It sends its coupons to the broker who, in turn, ensures that the dialysis agency provides its share of the costs. What this agency pays will vary from what another one pays because of agencies varying client trip needs and geographic locations.

The flow chart also shows what can happen in an instance when an agency wants vehicle parts or needs certified training for its operations. The agency calls the broker. The broker arranges with agency C and/or D to provide maintenance and training to the buyer on a regular basis. Again, the broker negotiates contracts to ensure that the users'

with the most cost-effective and appropriate mode of transportation--in this case, the taxi.

The broker already has a contract with the taxicab company to perform all demand-responsive trip requests on an hourly-paid basis. The taxi picks up the woman. She pays the driver with a coupon, and the broker assures that she receives a discount price as she is low income. The taxi may also pick up someone else in the same area who needs a ride. The private, for profit-provider performs its own scheduling and routing.

The taxi bills the broker by forwarding the collected coupon(s) to the broker. The broker reimburses the taxicab for its services at full cost. If the woman had belonged to an agency which had access to funds for its clients transportation, the broker would have in turn billed the agency. The agency would have paid the broker whatever was agreed upon in its contract. This way, the broker at least recovers part of its costs and can reimburse the taxicab company for less than what it would have cost otherwise. In this example, the elderly woman is an independent who pays part of the cost of her trip, the other unpaid portion being subsidized by public funds.



join service delivery.

4. Purchase-service: An agreement between agencies to purchase services from one another.<sup>5</sup>

Rosenbloom says that all of these levels "can be consolidated or developed separately."<sup>6</sup>

Brokering is often a tool used to coordinate. It facilitates the process and provides momentum. Dr. Ray Mundy, University of Tennessee, explains that under the brokerage concept, there is a broker or "middle-man" who ensures that the needs of the buyer are met with the seller. The broker ensures that users' needs are matched with the most appropriate mode of transportation service or program.<sup>7</sup>

A flow chart is provided in Figure 4 to show how a coordinated system can operate under the brokerage arrangement. The broker is the focal point. All requests for transportation services or programs are made to the broker. The broker has an established network of various resources in order to be able to accommodate the requests.

For example, an elderly woman calls the broker. She wants a ride to go pick up her food stamps and then go grocery shopping. She cannot walk to the bus stop because she has severe arthritis. The broker arranges for her trip



## Organization and Levels

Coordination can be arranged so that it operates under one manager, or several. The arrangement establishes a checks and balance system. For example, one agency can administer operations, and another one can administer the funding, or eligibility process.

The two agencies may even consolidate their entire systems and administer and operate together. One sees how coordination can be structured or nonstructured; for profit or nonprofit; and as a private or public entity. The arrangement is flexible. Whatever functions an agency performs best is usually what determines who assumes what responsibility. Whichever arrangement produces more cost-effective rides for the elderly and handicapped is the best choice.<sup>4</sup>

Sandra Rosenbloom, professor at the University of Texas and DOT consultant, identifies four coordination levels:

1. Non-service: Cooperative agreements exist between agencies for joint purchasing, operator training, maintenance programs, etc.
2. User-side: An "arrangement that allows the user to choose an existing transportation provider. . . ."
3. Joint-Service: An agreement between agencies to

## CHAPTER VI

### WHAT IS COORDINATION?

#### Definitions and Concepts

The Office of Human Development Services (OHDS) defines coordination as

a cooperative arrangement among human service agencies and public and private transportation operators aimed at realizing increased transportation benefits and cost effective service through the shared management and/or operation of one or more transportation functions.<sup>1</sup>

Three functions of a transportation system can be coordinated:

1. Vehicle operations: scheduling, routing, and dispatching of vehicles.
2. Maintenance: servicing, repairing, and storage of vehicles.
3. Administration: planning, management, record-keeping, and marketing the vehicle service.<sup>2</sup>

Any of these functions can be combined or consolidated with any part of another agency's functions. For example, two agencies may choose to pool their vehicles and operate them in the same geographical area via coordinated scheduling and routing.<sup>3</sup>

he believed that state-wide coordination could only come about if there was an incentive. He proposed a "reduction in state gasoline tax from seven cents per gallon to one cent per gallon to service providers operating under a consolidated agency . . . ." He also recommended that consolidated agencies should be restricted from using state transit subsidy funds. The carrots and sticks were not approved. The State Senate was not convinced that the transportation agencies' resources were so seriously under-utilized and duplicative. Ingalls said that the Department of Finance opposed the tax incentive because it was afraid "that the precedent established by giving a tax break to these organizations might open the floodgate of tax incentives for other programs." Without these incentives, Ingalls is convinced that coordination cannot be enforced even if it is state law. However, Ingalls does conclude that,

Even without required implementation of coordinated and consolidated services, this Bill still represents a major step forward in the battle to trim waste of uncoordinated, duplicative social service transportation.<sup>14</sup>

### Local

The Metropolitan Planning Organization (MPO) has fostered transportation coordination in San Antonio. In

assistance to initiate coordination is needed at the local level, particularly if no coordination has ever been done before. The agencies participating in coordination activities increased costs in the initial start-up, and did not realize a decrease in their unit costs. Burkhardt says that "Decreases in cost to participating agencies occurred only at sites with consolidated operations."<sup>7</sup>

It took about twelve to seventeen months for each site to initiate coordination operations. Burkhardt points out that this is surprising to people, but it's not unusual. First, the programs had to obtain the grant, and there is much pre-award activity that goes into the process. Second, staffing problems at every level occurred. Staff had to be pooled--directors, technicians, secretaries, drivers, dispatchers, and mechanics. A board is set up to manage policy and practices--local officials, consumers, and representatives. These administrative details are extremely time consuming.<sup>8</sup>

Contractual agreements with the providers, purchasers, and maintenance people can take months to negotiate. Burkhardt cites two problems most frequently encountered in this process: "Legal commitments from agencies to carry out

factors: namely, the geographic area to contend with; the demographic characteristics of the population to be served; the types of trip purposes generally provided; and the size of transportation resources available to work with. Once the program is underway, the premises and rationale for coordination should constantly be referred to in order to discover areas of achievements and failures. This is the way OHDS came up with its preliminary findings which serve to highlight the issues most likely to be involved in coordination.<sup>5</sup>

According to Burkhardt, the most significant finding about the demonstration programs' success was that "institutional, administrative, and perceptual barriers were overcome despite the problems involved." The objectives of efficiency and effectiveness of the programs, however, were not fully realized. It was discovered that no practical approaches to coordination have been demonstrated yet.<sup>6</sup>

The theme of the demonstration programs according to Burkhardt is: "Coordination is a more costly, complex, difficult, and time-consuming process than had been imagined." The premise that minimal incentive monies would be required for coordination proved false. A great deal of technical

TABLE 26

FIVE OHDS TRANSPORTATION DEMONSTRATION  
PROGRAMS FOR COORDINATION

| Coordination Activities                                 | Maryland | New York | Michigan | Florida | Arkansas |
|---|----------|----------|----------|---------|----------|
| Information and Re-<br>ferral                           | X        | X        |          |         | X        |
| Clearinghouse for Ride-<br>Sharing and Time-<br>Sharing | X        |          |          |         |          |
| Coordination of Opera-<br>tions                         |          | X        |          | X       |          |
| Consolidation of Vehi-<br>cle Operations                |          |          | X        | X       | X        |
| Purchase of Transporta-<br>tion Services                |          |          |          | X       | X        |
| Centralized Dispatching                                 |          | X        | X        | X       |          |
| Centralized Maintenance                                 | X        | X        | X        | X       | X        |
| Centralized Purchasing                                  | X        | X        | X        | X       |          |
| Planning Assistance                                     |          |          |          |         | X        |
| Funding Assistance                                      | X        |          |          |         |          |

SOURCE: J. Burkhardt, S. Knapp, and M. Ramsdell, Coordinated Transportation Demonstration Results Evaluation of the Office of Human Development Services Transportation Demonstration Program (Washington, D.C. Government Printing Office, 1980), p. 4.

OHDS recommends that any person who wants to coordinate should provide his initial premises about what coordination should achieve in his particular area, and then list the reasons for wanting to do so. The reasons will vary depending on several

3. Grand Rapids Transit Authority, Grand Rapids,  
Michigan

4. Greater Jacksonville Economic Opportunity, Inc.,  
Jacksonville, Florida

5. Northwest Arkansas Human Services, Inc., Fayetteville, Arkansas

Each area coordinated at various levels. Only three actually consolidated their vehicle operations. The types of functions the areas coordinated are shown in Table 26.

OHDS initiated the program based on two premises:

(1) That existing transportation services provided to OHDS populations through Federal, State, and local sources can be coordinated at the local level with minimal incentive monies, and (2) coordination or consolidation of transportation activities will increase efficiency (by reducing duplication and total system costs) and effectiveness (by reducing fragmentation and improving access to services).<sup>3</sup>

OHDS set forth its four reasons to coordinate:

1. To eliminate overlap and duplication of service (to the same population groups in the same geographic area).
2. To fill gaps in service.
3. To save money by eliminating duplication and by achieving economies of scale usually reserved for larger operations.
4. To improve and expand service.<sup>4</sup>

## CHAPTER VIII

### EVALUATION OF COORDINATION PROGRAMS

#### Five Demonstration Sites

J. Burkhardt and others of the Office of Human Development Services in Washington, D.C. evaluated five coordination demonstration programs after fourteen months of operation. Each program was funded in 1977 for two years by OHDS of the Department of Health, Education and Welfare (HEW). The purpose of the demonstration programs was to test the concept of coordination in several cities and to influence the direction of national policy based on their experiences. Burkhardt discusses the issues of coordination experienced at the program sites and indicates what kinds of achievements and problems are likely to be encountered by an area which coordinates.<sup>1</sup>

OHDS funded the following five areas for coordination programs:

1. Community Action Council of Howard County, Maryland, Inc.
2. Westchester County Department of Transportation, Westchester County, New York



16 Ibid., pp. 75, 54.

17 Ibid., pp. 30-32, 54.

18 Ibid., p. 19.

19 Ibid., p. 74.

20 VIA Board of Trustees, VIA Metropolitan Transit, Resolution on Coordination, 11-29-79-01, San Antonio, Tex., 1979.

21 VIA Metropolitan Transit, "Transition Plan for VIA Metropolitan Transit Program Accessibility," pp. 85-86.

22 Interview with Wanda Dyer.

23 VIA Metropolitan Transit, "Annual Status Report of: Transition Plan for VIA Metropolitan Transit Program Accessibility in Compliance with the DOT Section 504 Regulation" (San Antonio, Tex.: Grants/Planning Dept., 1981), pp. 4-7. (Typewritten.)

24 Transportation Coordination Team, Minutes of the Regular Meeting, VIA Metropolitan Transit, San Antonio, Tex., 25 April 1981.

25 VIA Metropolitan Transit, "Transition Plan Status Report," pp. 5-6.

26 Alamo Area Council of Governments, "Annual TCT Status Report: Final Draft" (San Antonio, Tex.: Metropolitan Planning Organization, 1981), n.p. (Typewritten.)

## Footnotes

<sup>1</sup>ACCD Workshop, p. 45.

<sup>2</sup>Ibid.

<sup>3</sup>Urban Mass Transportation Act of 1964 as Amended to 1978, and Other Related Laws, p. 35.

<sup>4</sup>ACCD Workshop, pp. 44-45.

<sup>5</sup>Ibid., p. 46.

<sup>6</sup>U.S., Department of Transportation, "Nondiscrimination on the Basis of Handicap in Federally Assisted Programs and Activities Receiving or Benefiting from Federal Financial Assistance," Federal Register, 31 May 1979, 31461-2.

<sup>7</sup>U.S., Dept. of Transportation, 20 July 1981, 37494.

<sup>8</sup>ACCD Workshop, p. 48.

<sup>9</sup>Ibid., pp. 47-48.

<sup>10</sup>Ibid., p. 47.

<sup>11</sup>Ibid., pp. 47-48.

<sup>12</sup>Walter M. Ingalls, "California's Social Service Transportation Improvement Act," Speech at Transportation Research Board Meeting, Washington, D.C., 12 January 1981, pp. 2-3. (Typewritten.)

<sup>13</sup>Carter-Goble Associates, Inc., "Los Angeles County Paratransit County Paratransit Coordination Project: Phase I Report of Paratransit Inventory and Preliminary Brokerage/Coordination Findings" (Los Angeles: n.p., 1980), pp. xv-xix. (Mimeographed.)

<sup>14</sup>Ingalls, pp. 3-5.

<sup>15</sup>Alamo Area Council of Governments, "Mobility Impaired Service Delivery Plan," p. 19.

About fifteen agency representatives have been regularly meeting since AACOG initiated the monthly workshops. Over the months, agency representatives have identified their administrative, operational, and maintenance problems in providing adequate transportation to elderly and handicapped clients. VIA's operator and dispatcher training course and bulk purchasing agreement were initiated through the Paratransit Provider Workshops. AACOG also provided agencies with the opportunity to receive a federal tax exemption on gas and oil; technical assistance from administrative experts on purchasing, insurance, and record keeping; ride-sharing programs and an informational bank of data and literature on elderly and handicapped transportation. In October, 1981, AACOG updated its "Handbook"--an inventory on existing local resources.<sup>26</sup>

Currently, the Paratransit Provider Workshop is looking into the most appropriate management structure for coordination with VIA as broker. How coordination should be arranged among the agencies will be an important factor in the area's elderly and handicapped transportation systems.

1981, VIA and AACOG presented a demonstration joint-service plan for coordination to the TCT. The plan divided up the county into five areas. Each TCT member agency was assigned an area. Each agency was to make an attempt to coordinate some of the agencies' routing and scheduling functions. Group trips were to be arranged in their area with an elderly home for example, and then coordinated with VIA if possible. The plan was intended to be for a one-month trial period to see if a few agencies would participate and benefit. The TCT did not approve the plan. To attempt joint-service coordination at that time seemed premature to some TCT members. They were afraid of turfism and the cost of staff time to actually work with agency administrators.<sup>24</sup>

The idea for Paratransit Provider Workshops for agency administrators was initiated by AACOG instead. In April, 1979, AACOG established a forum for agency representatives whereby they could cooperatively and incrementally work toward all levels of coordination. The TCT subsequently dissolved, and the agencies began formally working toward coordination on their own initiative. This approach seemed to allay the problem of turfism, and agency administrators assumed more responsibility in the decision making process of local coordination efforts.<sup>25</sup>

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transportation was available to the public for 50 cents a trip, why pay more for their clients who are part of that public. Without an incentive for the agencies to reimburse the transit operator, this purchase-service level of coordination could not be achieved. Agencies would continue to "double-dip" in government transportation funds.<sup>22</sup>

In 1979-80, VIA moved toward nonservice coordination. Cooperative agreements were adopted by the VIA Board of Trustees, so that agencies could purchase transit related parts/materials/supplies through VIA at discount prices for only a minimal service fee. About five agencies entered into the formal agreements. VIA also began providing operator training courses for any agency's drivers or staff. For only \$10 an agency could assure that its drivers were prepared to handle a paratransit vehicle and elderly and handicapped riders. A free dispatcher training program for agencies was also developed. Any agency which desired to improve its transportation system's routing, scheduling, dispatching, and record keeping techniques could obtain on-the-job training.<sup>23</sup>

The TCT encouraged these types of coordination efforts, but the MPO did not fund any of these projects. In

Chapter V. Rather, it served to break ground for more specific coordination policies to follow.

The initial VIA policy was intended to support Rosenbloom's purchase-service level of coordination. VIAtrans was picking up mobility impaired people who were associated with human service organizations--programs relating to rehabilitation services, education, employment, social/recreation, and health programs. The majority of these agencies had transportation funds from one or more of the various local, state, and federal sources cited in Chapter V. Agency clients (or the agency program coordinators on behalf of them) were requesting VIAtrans rides to go to the agency for their therapeutic treatment, educational training, and so on. VIAtrans quickly became inundated with agency clients during its peak hours. More than a third of the daily trips scheduled were for people to go to an agency or other agency related locations. The majority of subscription service was taken by clients who had to go every day for treatment.<sup>21</sup>

VIA had hoped to increase VIAtrans cost recovery by agency reimbursement agreements for client trips. This purchase-service coordination attempt, however, had little momentum. It was a basic tenet among agencies that if

Later, the TCT members worked together to conduct a city-wide survey of the mobility impaired in 1980, which was discussed in Chapter I of this Research Project. The TCT also conducted further inventory studies on the agencies' transportation resources. VIA went door-to-door to each of the agencies to try to learn what they had and what they needed in the way of transportation for the elderly and handicapped.

In its 1979 "Mobility Impaired Service Delivery Plan," AACOG recommended that a brokerage approach to coordination should be planned and implemented. AACOG believed that there was a willingness to coordinate by agencies and consumers.<sup>19</sup>

In 1979, the TSC requested VIA to consider the recommendation that VIA serve as a broker in order to coordinate area transportation service. The VIA Board of Trustees endorsed the policy:

Resolved that in support of the policy adopted by Transportation Coordination Team regarding social service agencies' use of funds for the transportation of their mobility impaired clients, it shall be the policy of VIA that social service agencies which receive funds, or are eligible to receive funds, for the purpose of providing transportation for their mobility impaired clients shall provide such transportation either by utilizing vehicles owned and operated by them or by contract with VIA.<sup>20</sup>

This policy did not approve the entire spectrum of coordination levels and consolidation cited by Rosenbloom in

people could obtain inexpensive, curb-to-curb service, seven days a week to any place they wanted to go in the service area. Riders were not restricted from using the service by the kinds of benefits they received, nor their disability, age, or trip purpose. This is the kind of paratransit system that tries to serve as many people as possible, but it cannot serve everyone.<sup>17</sup>

AACOG looked at the level of transportation being provided to the mobility impaired and determined that San Antonio could benefit if it pursued coordination. When the TCT was adopted, the subcommittee was to further the studies on the elderly and handicapped with coordination in mind. The TCT consisted of dedicated transportation planners and administrators from AACOG, VIA, the State Department of Highways and Public Transportation, the Handicapped Access Office of the City of San Antonio, and the Traffic and Transportation Department of the City of San Antonio. Elderly and handicapped consumers were also included on the subcommittee.<sup>1</sup>

All the transportation agencies were funded by the MPO for about two years in order to conduct project plans directly related to coordination. The HAO, AACOG, and the SDHPT conducted studies on the target population around 1976.



1978, the Transportation Steering Committee (TSC) of the MPO approved the first elderly and handicapped study plan funded by the Urban Mass Transportation Administration. The Alamo Area Council of Governments (AACOG) Transportation Department conducted the study plan. It examined the target population; the available transportation resources; agencies' problems; and made several recommendations to the TSC on coordination. As a result of its "Mobility Impaired Service Delivery Plan," the TSC appointed a subcommittee called the Transportation Coordination Team (TCT). The TCT was to continue technical studies on elderly and handicapped transportation, and report to the TSC on the local potential for coordination.<sup>15</sup>

The local MPO is required to include elderly and handicapped projects in its County plans. AACOG and other transportation agencies recognized that the implementation of VIAtrans in 1979 would not be able to satisfy the entire mobility impaired population in the area. The other transportation providers would have to continue and improve their operations if the demand was expected to be met.<sup>16</sup>

AACOG's study found that the concept of VIAtrans would serve a great transportation need. Mobility impaired

previously agreed on coordinating activities [sic]; and (2) contractual commitments from major Federal-State funding sources." The agencies have got to be able to sign-off on contracts or else they cannot legally or financially participate. Some agencies will take months to negotiate the terms and conditions of the contracts with their clients, board, and their funding sources' regulations.<sup>9</sup>

Vehicle acquisition and maintenance slowed down the start-up of the coordination programs. The condition of vehicles to begin with were not in proper condition to operate. Standards of condition have to be met, and the contract for maintenance must be in effect before work can be initiated. A lot of the agencies' vehicles are known to be aged, and lack lifts and two-way radios which are particularly vital if the geographic area to be covered is large. Start-up costs for maintenance are another problem. Many agencies never had preventive maintenance programs nor high standards of operating conditions.<sup>10</sup>

Common carrier licenses had to be acquired by two of the sites, and another one had to obtain an invalid coach permit. This took over a year. Typically, these agencies were "not regulated by any state entity because

Human service organizations serve only certain people. Trip costs are unusually high for some of them. Numerous trips are duplicated for the same population in the same geographical area. VIAtrans and agency vans even duplicate one another's services. Agency vehicles are ordinarily underutilized. In addition, soon-to-be retired vehicles lack wheelchair lifts, and two-way radios. Insurance coverage is oftentimes inadequate, and costly.<sup>2</sup>

The taxis are becoming increasingly recognized as a future resource for elderly and handicapped transportation services. The latest Regulation encourages coordination efforts as much as possible with private carriers. Taxicabs' sources appear the most promising. It can expand. Labor is less costly. Several companies provide integrated maintenance services. Driver salaries are lower. The service area is vast, and they operate twenty-four hours a day. Trip costs are less than most van trips.

Human service organization transportation providers are dying out from lack of interest and government support. Some agencies view their transportation responsibilities as a secondary role. Some agencies have recently done away with their service. They would just as soon have transportation

Each has served its purpose. Agencies provided meaningful involvement of their clients in rehabilitative, educational, and health programs. Taxis provided service to people by direct routes with considerable speed and privacy. Demand-responsive van systems, such as VIAtrans, provide even the severely disabled the opportunity to go anywhere they want.

Each is limited by its resources, regulations and/or customs. The transit carrier has developed from providing only conventional fixed-route service to an additional mode which provides service to the mobility impaired public. In order to satisfy all of the County's mobility impaired people's trip needs in its present manner, as much as ten times the amount of its current operating costs would be needed. Operating costs significantly exceed DOT's recommended 3.5 percent of Section 5 funds. Vehicles are labor intensive. The 1,246 square mile service area it serves is a strain on productivity and keeps the system in constant demand.

The taxicab companies are perceived by some people as being insensitive and costly. High driver turnover rates may be a reason for the former; and the cost of public mass transportation is much lower compared to taxi service.

affected people, institutions, and laws which had either forgotten or ignored their transportation needs.

Locally, the movement was not apparent until the early seventies. Only a handful of students obtained the first life-equipped van at San Antonio College. They also helped to influence the arrival of the area's first public paratransit system. Currently, about four local disabled advocacy organizations exist and address transportation concerns.

Disabled activism is found to be characteristic of our democratic process. If democracy is to be healthy, pluralism must persevere. Citizen participation by disabled people is necessary in order for them to improve their socioeconomic status and to help institutions be responsive to the public's needs.

### Paratransit Systems

Paratransit systems developed from social and economic needs over several decades. Taxis provided transportation to elderly and handicapped ever since they began. When human service organizations established free transportation for its clients, taxis were affected by the competition. Transit operators provided demand-responsive systems later when national policy affected transportation.

The local and national findings suggest three areas elderly and handicapped transportation research can concentrate on: population, geographics, and general travel behavior. A refinement of the local mobility impaired population size could help to determine travel demands. Residential locations should continue to be plotted on a map. Studies could then be performed to find out about their trip behavior relative to population density and frequencies. Studies could be performed on the mobility impaired handicapped and elderly people separately to learn what effect age has on their travel behavior, and if needs greatly differ. An additional investigation into preference of mode could explain why many handicapped people are dissatisfied with taxis. Agencies which rely on their services might become aware of something unusual about them which studies are overlooking.

### Disabled Activism

The handicapped college youth have been a strong voice on accessible transportation issues. Disabled students were no doubt unhappy and dissatisfied with the very socioeconomic characteristics described in Chapter II.

In the sixties, the spirit of autonomy moved across the nation--for both the young and the old. Collective action

Associates report that 4.2 to 6.4 percent of the urban population is mobility impaired. A range for all these findings is 19,777 to 63,288 persons in Bexar County. Apparently, various definitions have been used.

The Michaels and Weiler Study examined other metropolitan areas to reveal that several factors affect travel patterns of the mobility impaired. The urban and suburban handicapped residents have varying trip purposes and frequencies. The suburban handicapped are considered more independent. Perhaps urban handicapped people in less dense areas have higher incomes. The Portland Study indicates that the higher the handicapped person's income is, the more he travels. It was concluded that a person with severe mobility impaired limitations travels two times more for work purposes than a person with little mobility impaired limitations. Trip purposes vary from city to city.

Handicapped people choose their mode of transportation for the same reasons nonmobility impaired persons do. They seem to favor travel by car, usually as the passenger. This can be inconvenient. Income and disability affect automobile ownership. Since many are on fixed incomes, they can only afford public transportation. Some of these cannot afford that cost.

## CHAPTER IX

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### The Mobility Impaired

Local and national findings show that the mobility impaired population is indeed a minority with characteristics unlike the general population. They are mostly unemployed, have an annual income of less than \$5,000, and are sixty-two years and older. Some cannot work due to age, physical limitations, attitudinal barriers, and lack of education and transportation. The target population is more urban than rural. The local survey did not reliably indicate race/ethnicity, housing, disabilities, nor trip frequencies.

This Research Project does not determine how many mobility impaired exist in Bexar County. An entire research project could be devoted to this task. HAO has determined that 21 percent of the County has some sort of disability. Of these, 90 percent are not limited in a major activity. CBO reports that 14 percent of the total population is handicapped.<sup>1</sup> Forty-five percent of these cannot utilize public transportation but 93 percent can use taxis. Crain and



<sup>17</sup>Sandra Rosenbloom and David Warren, "A Comparison of Two Brokerages: the Lessons to be Learned from Houston and Pittsburgh (Houston, Tex.: Metropolitan Transit Authority, 1980), p. 2. (Typewritten.)

<sup>18</sup>Interview with Frank Sheehan.

<sup>19</sup>Rosenbloom and Warren, p. 3.

<sup>20</sup>Ibid., pp. 3-4.

<sup>21</sup>Ibid., p. 5.

<sup>22</sup>Interview with Frank Sheehan.

<sup>23</sup>Rosenbloom and Warren, pp. 5-6.

<sup>24</sup>Interview with Frank Sheehan.

<sup>25</sup>Rosenbloom and Warren, pp. 8, 11.

<sup>26</sup>Interview with Frank Sheehan.

<sup>27</sup>Rosenbloom and Warren, pp. 12-13.

<sup>28</sup>Ibid., p. 14.

<sup>29</sup>Interview with Wanda Dyer.

<sup>30</sup>Interview with Frank Sheehan.

<sup>31</sup>Rosenbloom and Warren, pp. 14-15.

handicapped transportation in order to receive greater return on the money spent.

#### Footnotes

<sup>1</sup>J. Burkhardt, S. Knapp, and M. Ramsdell, Coordinated Transportation Demonstration Results Evaluation of the Office of Human Development Services Transportation Demonstration Program (Washington, D.C.: Government Printing Office, 1980), pp. 1-2.

<sup>2</sup>Ibid., pp. 2-5.

<sup>3</sup>Ibid., p. 1.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid., pp. 18, 1.

<sup>6</sup>Ibid., p. 3.

<sup>7</sup>Ibid., pp. 6, 8.

<sup>8</sup>Ibid., pp. 6-7.

<sup>9</sup>Ibid., p. 7.

<sup>10</sup>Ibid.

<sup>11</sup>Ibid.

<sup>12</sup>Interview with Frank Sheehan, Houston METROLift, San Antonio, Texas, 10 May 1982.

<sup>13</sup>Burkhardt, Knapp, and Ramsdell, p. 8.

<sup>14</sup>Ibid., p. 9.

<sup>15</sup>Ibid., p. 16.

<sup>16</sup>Ibid., p. 17.

from Easter Seals for 25 percent of the true cost. Eligibility requirements are stringent. In order to qualify, the applicant must go to Easter Seals where a therapy specialist takes him through a mock-up of bus steps to ensure ACCESS that this rider is mobility impaired. For this reason alone, ACCESS claims that agencies do not "dump" their clients on them for subsidized fares. According to ACCESS, anyone that really needs service "should be allowed to use ACCESS in preference to their agency transportation."<sup>27</sup>

According to Rosenbloom, both METROLift and ACCESS "hoped to make the transportation portion of the total service self-sufficient; neither has realized that goal."<sup>28</sup> METROLift recovers about 25 to 30 percent of its costs compared to VIAtrans' 5 to 7 percent rate.<sup>29</sup> METROLift's average deficit per trip was \$11.20 in May of 1979, but in 1981, it was about \$3.48. Administrative costs are not included. In 1979-80, Houston spent a total of \$825,000 on its program; and in 1980-81, \$1,920,305 was spent.<sup>30</sup> ACCESS recovers about half of all of its operating costs. Its deficits have decreased, and average cost per one-way trip is \$8.87.<sup>31</sup> What Houston and Pittsburgh seem to show is that the federal government must heavily subsidize elderly and

Company to receive all the trip requests, and to perform all routing, scheduling, and dispatching responsibilities. METROLift manages about sixty-one vehicles. Only some are lift-equipped. The taxi operator operates the lift-equipped vehicles. Taxis are paid about \$12.00 per vehicle hour, and agency rates vary.<sup>24</sup>

ACCESS contracts with about seven organizations, three of which are taxicabs. Each agency operates in its own designated zone area most of the time. An agency may sell and/or buy service from the MTA at negotiable prices. Trip costs "range from 75¢ per one-way trip for the Area Agency on Aging to \$5.00 per trip for the State Department of Human Resources." These arrangements and costs to the agency have served to encourage other agencies to join in METROLIFT's program.<sup>25</sup>

In May, 1979, METROLift was carrying 2,450 one-way passenger trips. By 1982, ridership was about 33,000. METROLift's increase is due to its increase in agency contracts.<sup>26</sup>

Pittsburgh's elderly and handicapped people call for rides at "Easter Seals Association which is under contract to ACCESS to screen applicants." Riders buy coupon books

in Houston and Pittsburgh. METROLift requires 24-hour notice for rides which are only curbside service. All passengers handle only fare tickets worth 50¢ each.<sup>21</sup> The color of the ticket designates whether the rider is agency oriented or nonagency affiliated. The latter pays 50¢ for four miles or less or two 50¢ coupons for trips over four miles. Most of their trips are about \$1.00. The trip coupons are available by mail or at pick-up points, as long as the rider is qualified. Agency riders turn their tickets into the driver, and the broker in turn bills the trips to the agency.<sup>22</sup>

Pittsburgh's service costs more. Its door-to-door service operates in 195 zones, and fares are according to the number of zones traveled through. An intra-zone trip costs \$2.00, and \$1.00 per additional zone. Fares can range from \$2.00 to \$43.00 for unsubsidized passengers and from 50¢ to \$10.00 for MTA subsidized riders.<sup>23</sup>

METROLift contracts with six agencies for service: Texas Department of Human Resources, City of Houston, Medicaid, Area Agency on Aging, Easter Seals, and Texas Rehabilitation Commission. Only two of them are major service providers. METROLift also contracts with Yellow Cab Taxicab

but do not own or operate any of the vehicles. They contract with non-profit and profit agency providers. Pittsburgh contracts with a private firm, called ACCESS, Inc., and METROLift is the broker for Houston's MTA.<sup>17</sup>

Houston initiated its program in 1979, after two years of trying to sell the idea of coordination to policy makers, administrators, and consumers. Houston never had a demand-responsive system operated by the MTA like VIA did in 1977. Thus, the program Houston started (modeled after Pittsburgh's), never encountered Section 13 Labor Protection difficulty with UMTA funds which might restrict the shifting of funds to nonunion oriented agencies.<sup>18</sup>

Pittsburgh's County MTA service area for about 1.4 million people is 700 square miles; Houston's MTA service area for METROLift is 300 square miles, and serves only the city population of about 1.7 million.<sup>19</sup>

ACCESS and METROLift purchase vehicle service from their contractors on a vehicle hour basis which varies. Each serve agency affiliated people, as well as persons not associated with an agency. All riders must be elderly and/or handicapped and reside within their service areas.<sup>20</sup>

Rosenbloom compares the level of service and fares

Burkhart cites three problems the coordinated program has to resolve: (1) the continual search for funding; (2) "decreasing unit costs; and (3) obtaining additional resources (including vehicles and drivers)."14 In addition, Burkhardt writes:

The technical criticisms against coordination as a panacea are compelling. The basic selling point for coordination has been that it saves money. In fact, this is not in general true--it is only in very special circumstances that coordination costs less. Coordination is more costly and time-consuming than any of us had initially anticipated. There are substantial front-end costs of planning and administration that generally will not (or cannot legally) be borne by any of the participants.<sup>15</sup>

. . . In addition to such problems, it also appears that coordination between social service agencies and existing public and private transportation providers will be more difficult than previously assumed and that substantial federal monetary assistance will be necessary to fund the staff and technical expertise needed to make coordination work.<sup>16</sup> (Emphasis mine.)

#### Houston's METROLift and Pittsburgh's ACCESS Programs

Sandra Rosenbloom evaluated two coordinated programs in order to see if paratransit systems could operate more efficiently and effectively. She examined Houston's METROLift Program, and Pittsburgh's ACCESS Program. Both operate a coordinated system under the brokerage concept. The Metropolitan Transit Authorities (MTA) manage the systems,

they do not carry the general public and do not charge fares. In the coordination program, however, a fare structure is required. This leads to the need for a program to establish a fare structure, and few of the agencies are ever going to be able to pay the same price because of different trip needs and funding amounts. The rider who is non-agency affiliated generally ends up paying more than the agency affiliated rider. In addition, under the coordination concept, the provision for free service for low-income people who are elderly and handicapped is taken into consideration. The negotiating process of maintenance, bidding, procurement, licensing, and users' fares is a complex and overwhelming job. These things alone can frustrate the agency from even wanting to attempt coordination.<sup>12</sup>

The sites examined by Burkhardt showed that ridership increased. This generally takes about a year to recognize. Reliable, quality service though has not been a selling feature of any of the coordinated sites. Initially, some of the pooled staff were not very experienced. Some of the agencies' drivers and dispatchers were not appropriately trained. Retraining of staff must be considered in the start-up costs.<sup>13</sup>



providers perform the service. UMTA Section 16(b)(2) monies will assist only so many agencies for van replacements. Only about forty-four vehicles are expected to be replaced in Texas in 1982, while there are over 100 in Bexar County alone which are either ready, or near ready, for replacement. Consumers express growing frustration that these vans do not provide the handicapped public an opportunity to participate.

The transit operator is regulated to continue to provide service to the mobility impaired public. The Federal Government assures the operators that capital assistance will continue to be provided; however, by 1984-85, operating funds are expected to cease. Fortunately, public funds should carry operations on, but increased pressure will be exerted on the transit operator to recover costs.

### Coordination

Coordination is a simple concept to understand, as explained by Rosenbloom in terms of functions and levels. It is dynamic and flexible. It is a network of providers who voluntarily unite to share their resources and strengthen their output. Mundy explains brokering as a tool to coordinate. Independent and/or subscription service riders who are nonagency or agency affiliated call the broker with their trip

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being replaced at the same pace. The public's demand increases. The systems may very well be forced into coordination despite policy and attitudes. Transportation coordination is a positive direction, though. It means providing more public transportation in a better way. It requires more initiative, but there are transportation systems which move hundreds of thousands of people every day in an efficient manner from one central information point. Coordination could be performed successfully under the brokerage concept. It just takes a cooperative goal setting and the sharing of existing resources.

#### Footnotes

<sup>1</sup>Congressional Budget Office, p. 8.

<sup>2</sup>Interview with Frank Sheehan.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

length of trips in miles. The independent rider usually ends up paying more. What one agency can afford to pay will be different from another. Problems concerned with equity would have to be resolved. Also, people who could not afford anything for a trip would have to be incorporated into the system. As long as the person is mobility impaired, it is up to the broker to locate transportation to serve his need. Houston provides referral to Red Cross transportation for people who truly cannot pay.<sup>3</sup>

Neither of the systems breaks even, but more costs can be recovered. A 30 to 50 percent recovery rate is achieved by METROLift and ACCESS. The former always bills the agencies the total costs and requests only the negotiated reimbursement. This way, the agency sees its savings and realizes the Federal subsidies involved.<sup>4</sup>

San Antonio-Bexar County has the potential for transportation coordination. The mobility impaired public requires safe, reliable, and affordable transportation to work, school, and home. The paratransit systems are not currently operating at their full potential. They are overwhelmed by institutional, administrative, and regulatory barriers. The resources are wearing out, and they are not



The brokering systems in Pittsburgh and Houston seem to be making management systems more efficient; recovering a good proportion of their costs; and providing more rides the elderly and handicapped. All information flows through one central point--the broker. In Pittsburgh, the service is dispatched by geographical zones, and in Houston, by two-way radios. Central communication systems seem to reduce vehicular paths from crossing at the same time or going the same way. Productivity is enhanced, and vehicles are used more efficiently. Record keeping can be more accountable to The administrator can relieve the actual provider of such responsibilities.

The broker oversees the eligibility process better. Mobility impaired people are not turned away because of their age, income, disability, or benefits. Under brokering, the current restrictions can afford to be lifted. If an agency wants some of its clients to receive door-to-door service, a contract can be negotiated to provide it for whatever additional costs.

The broker oversees fare structure and reimbursement. Discounts are provided to independent riders, as well as to agency affiliated ones. The riders and agencies pay for

Local attempts to coordinate are timely. The condition of current resources is mediocre. Providers are looking for ways to stretch their dollars. The existence of the Paratransit Provider Workshop shows evidence that some providers are interested in the idea of coordination.

### Coordination Programs

OHDS' evaluation of its five demonstration programs, and overview of Houston's METROLift and Pittsburgh's ACCESS Systems, shows some costs and benefits to coordination.

Consolidated agencies appeared to experience cost savings while small scale levels of coordination did not. One of OHDS' premises was that little incentive monies would be required at the local level. Local efforts in San Antonio Bexar County already show that this proves false. Over a hundred thousand dollars has been utilized for research and planning, site visits, citizen participation, and so on. Administrative preparations are no small task. Another year would probably be required to just establish operations. The program would require obtaining grant awards, contracts, bidding, personnel, public input, vehicle acquisition and so on. A reduction in costs may not be realized for one to three years. A continual search for funds must be resolved.

coordinated system. A state law sounds simple, but it can become such a forced political issue that agencies will not want to coordinate, even if it is beneficial. In addition, most national transportation coordination programs are in their early stages of operation. It may be best to avoid locking a state into one direction until more experience is gained. Some areas would be better off without it. To maintain flexibility is important. In addition, OHDS reveals from its evaluative studies that the agencies' greatest achievements were to overcome institutional, administrative, and regulatory barriers. A state law may be unnecessary.

### Local Efforts

Local coordination activities reveal that the area is paving the way for coordination. Several years ago, the MPO-TCT subcommittee recommended that the transit operator become the broker. The community is just now examining the structural arrangements, which shows that several years of just talking about it have transpired. No one agency has decided to adopt any arrangement at this time. Consumers, providers, and officials are not quite sure what the consequences would be.

requests. The broker locates the appropriate mode of transportation. Agencies call the broker to locate service programs for them. The broker can coordinate in a diversified fashion (Figure 4) or centralized way (Figure 5). The coordinated system attempts to make management more efficient, service trips more cost-effective and the actual number of trips provided more plentiful.

Federal Regulations and guidelines have been filled with references to coordination for several years now. Some localities believe that if state laws mandated coordination, it would happen. The Los Angeles Project's report to the Transportation Commission showed that after nearly a year of mandatory inventory, some agency providers did not provide their operational and financial information. Turfism prevailed. Some agencies did not want to pool resources. Ingall's comments to the Transportation Board about his Bill informed administrators that enforcement is not possible without incentives. On the other hand, Houston began its coordinated brokerage system without a state law. Two years of talking initiated it.

Perhaps at this time, any efforts to pass a law would be better spent on actually planning and developing a

## VITA

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