



ORIGINS AND DESTINATIONS STUDY OF OLDER PERSONS

Final Report 614

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| 16. Abstract <p>The purpose of this research was to help provide insight into the travel behavior and transportation needs of older persons in Pima County. Several methods of data collection were done including face-to-face in-home interviews of seniors with mobility limitations, interviews with seniors who attended senior centers, and a mail survey to a sample that was representative of seniors in Pima County. The results of the study suggest that seniors are primarily responsible for meeting their own transportation needs. However as these seniors age, they are facing more challenges in managing their needs to travel freely around their communities. The seniors we surveyed at the senior centers are more at risk than the seniors we surveyed through the mailed survey because of lower income, lower health status, and a larger number who live alone.</p> <p>Seniors' driving habits are changing. Almost half report driving less in the past 2 years and 40% of respondents had no knowledge of public transportation services available in their communities. While 71% would prefer a friend or family member to drive when they cannot, seniors who live alone will have limited options.</p> <p>The lack of transportation services can have a significant impact on quality of life for these seniors. Many cited less participation in leisure activities because of driving less. More than half feel that it would be difficult to remain in their current home if they are no longer able to drive. In fact, 24% have moved into a new residence since they stopped driving. Seniors need more transportation options to stay active and involved. The vast majority of the "trips" they make on a daily/weekly basis are for social events, to do "errands", or go to church.</p> <p>Seniors feel that improving the quality of transportation services in the community will involve more dependable transportation and having a variety of options for transportation services.</p> | | | | | |
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SI* (MODERN METRIC) CONVERSION FACTORS

| APPROXIMATE CONVERSIONS TO SI UNITS | | | | | APPROXIMATE CONVERSIONS FROM SI UNITS | | | | |
|---|----------------------------|----------------------------|--------------------------------|-------------------|--|--------------------------------|-------------|----------------------------|---------------------|
| Symbol | When You Know | Multiply By | To Find | Symbol | Symbol | When You Know | Multiply By | To Find | Symbol |
| <u>LENGTH</u> | | | | | <u>LENGTH</u> | | | | |
| in | inches | 25.4 | millimeters | mm | mm | millimeters | 0.039 | inches | in |
| ft | feet | 0.305 | meters | m | m | meters | 3.28 | feet | ft |
| yd | yards | 0.914 | meters | m | m | meters | 1.09 | yards | yd |
| mi | miles | 1.61 | kilometers | km | km | kilometers | 0.621 | miles | mi |
| <u>AREA</u> | | | | | <u>AREA</u> | | | | |
| in ² | square inches | 645.2 | square millimeters | mm ² | mm ² | Square millimeters | 0.0016 | square inches | in ² |
| ft ² | square feet | 0.093 | square meters | m ² | m ² | Square meters | 10.764 | square feet | ft ² |
| yd ² | square yards | 0.836 | square meters | m ² | m ² | Square meters | 1.195 | square yards | yd ² |
| ac | acres | 0.405 | hectares | ha | ha | hectares | 2.47 | acres | ac |
| mi ² | square miles | 2.59 | square kilometers | km ² | km ² | Square kilometers | 0.386 | square miles | mi ² |
| <u>VOLUME</u> | | | | | <u>VOLUME</u> | | | | |
| fl oz | fluid ounces | 29.57 | milliliters | mL | mL | milliliters | 0.034 | fluid ounces | fl oz |
| gal | gallons | 3.785 | liters | L | L | liters | 0.264 | gallons | gal |
| ft ³ | cubic feet | 0.028 | cubic meters | m ³ | m ³ | Cubic meters | 35.315 | cubic feet | ft ³ |
| yd ³ | cubic yards | 0.765 | cubic meters | m ³ | m ³ | Cubic meters | 1.308 | cubic yards | yd ³ |
| NOTE: Volumes greater than 1000L shall be shown in m ³ . | | | | | | | | | |
| <u>MASS</u> | | | | | <u>MASS</u> | | | | |
| oz | ounces | 28.35 | grams | g | g | grams | 0.035 | ounces | oz |
| lb | pounds | 0.454 | kilograms | kg | kg | kilograms | 2.205 | pounds | lb |
| T | short tons (2000lb) | 0.907 | megagrams (or "metric ton") | mg (or "t") | Mg | megagrams (or "metric ton") | 1.102 | short tons (2000lb) | T |
| <u>TEMPERATURE (exact)</u> | | | | | <u>TEMPERATURE (exact)</u> | | | | |
| °F | Fahrenheit temperature | 5(F-32)/9 or (F-32)/1.8 | Celsius temperature | °C | °C | Celsius temperature | 1.8C + 32 | Fahrenheit temperature | °F |
| <u>ILLUMINATION</u> | | | | | <u>ILLUMINATION</u> | | | | |
| fc | foot candles | 10.76 | lux | lx | lx | lux | 0.0929 | foot-candles | fc |
| fl | foot-Lamberts | 3.426 | candela/m ² | cd/m ² | cd/m ² | candela/m ² | 0.2919 | foot-Lamberts | fl |
| <u>FORCE AND PRESSURE OR STRESS</u> | | | | | <u>FORCE AND PRESSURE OR STRESS</u> | | | | |
| lbf | poundforce | 4.45 | newtons | N | N | newtons | 0.225 | poundforce | lbf |
| lbf/in ² | poundforce per square inch | 6.89 | kilopascals | kPa | kPa | kilopascals | 0.145 | poundforce per square inch | lbf/in ² |

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EXECUTIVE SUMMARY

The purpose of this research was to provide insight into the travel behavior and transportation needs of older persons in Pima County. Several methods of data collection were done including face-to-face in-home interviews of seniors with mobility limitations, interviews with seniors who attended senior centers, and a mail survey to a sample that was representative of seniors in Pima County.

The results of the study suggest that seniors are primarily responsible for meeting their own transportation needs. However as they age, they are facing more challenges in managing their needs to travel freely around their communities. The seniors we surveyed at the senior centers are more at risk than the seniors we surveyed through the mailed survey because of lower income, lower health status, and a larger number who live alone.

Seniors make an average of 8.87 trips a week. Seniors report driving themselves for almost 90% of those trips,. Less than 5% of seniors interviewed use any type of public or senior/disabled transportation services. For seniors who are “mobility impaired” the feeling is that public transportation is not usable because of their special needs, or long waits, or they live in areas where these services are not available

Seniors’ driving habits are changing. Almost half report driving less in the past two years, and 40% of respondents had no knowledge of public transportation services available in their communities. While 71% would prefer a friend or family member to drive when they cannot, seniors who live alone will have limited options.

The lack of transportation services can have a significant impact on quality of life for these seniors. 25% cited less participation in leisure activities because of driving less. 56% feel that it would be difficult to remain in their current home if they are no longer able to drive. In fact, 24% have moved into a new residence since they stopped driving.

Seniors need more transportation options to stay active and involved. The vast majority of the “trips” they make on a daily/weekly basis are for social events, to do “errands”, or go to church.

Seniors feel that improving the quality of transportation services in the community will involve more dependable transportation and having a variety of options for transportation services.

I. INTRODUCTION

PURPOSE OF THE STUDY

The purpose of this research was to help provide insight into the travel behavior and transportation needs of older persons in Pima County. Issues such as travel within the home community, barriers to mobility, and transportation needs among older adults (seniors) have not been well researched. In this study older adults are defined as people 55 and older. This study provides the following information:

- General aspects of travel behavior among seniors in Pima County:
 - Where do seniors need to go during the course of their daily lives?
 - What means of transportation (travel mode) do they use?
 - How frequently do they take trips within their own communities?
 - What is the average distance seniors travel to accomplish common daily activities?
 - What times of day do seniors most commonly travel within their communities?
- Concerns related to driving and transportation in the community.
- Mobility constraints among seniors in Pima County:
 - What barriers and constraints do seniors perceive with respect to travel in their communities?
 - How do they feel these barriers and constraints might be overcome?
 - How do mobility issues affect seniors' access to various services (such as health care, shopping, religious services, etc.) and social opportunities (such as senior centers, visits to family and friends, etc.)?
- Unmet transportation needs of seniors.
- Demographics of seniors.

STUDY METHODS

This project began with a comprehensive literature review of transportation needs and issues with respect to older persons. This portion of the project is presented in section two. The data collection phase involved two survey efforts and several interviews, the results of which are presented in section three.

A first project component included interviews with 20 mobility impaired seniors. This qualitative data focused specifically on the needs of seniors who are mobility impaired. Participants were identified through *My House Senior Living*, an organization that works with mobility impaired populations, and the Pima Council on Aging. Staff from *My House Senior Living* volunteered to conduct the interviews as they were already known to participants. Interviewees were asked who they live with (if anyone); where they usually need to go and how they get there; if they use public transportation, how difficult it is to use, and what would make it easier; and problems they have experienced related to transportation.

The first survey effort was a travel diary given to older adults. Data were collected for the 12 months between October 2006 and September 2007. A convenient sample of 135 seniors who visit senior centers or other senior facilities/programs was asked to complete a diary one day a month. There were eight senior centers in Pima County where individuals were contacted including those in Tucson, Green Valley, Marana and Ajo. The researchers went to each of the senior centers and gave a presentation to those in attendance. Participants were enlisted and provided their year's worth of diaries. Each was assigned one day a month on which to complete their diaries. A mix of seniors who have a car and drive as well as those who do not was included. Participants were sent post card reminders shortly before their assigned date for completion of the diary every month. The diary asked for travel origin, destination, time of travel, purpose of travel, and form of transportation used. It also asked what barriers related to transportation, if any, were encountered. The diary was available in English and Spanish.

The final data collection effort was a mail survey to a random sample of 1,500 older adults in Pima County. A list was purchased from Survey Sampling, Inc. The survey focused on perceived barriers to travel in the community, and transportation needs and issues. A technique commonly used in social science research was used for the mail survey. This technique employs an initial survey mailing that provides a questionnaire, a cover letter, and a postage-paid reply envelope to prospective respondents. This was followed by a post card follow-up to increase sample size. Normally, response rates are determined by the salience of a study to prospective respondents. Controlling for non-deliverable surveys (32), a 52% response rate was achieved for a final sample size of 760. This is generally considered to be a good response rate.

To develop the survey instruments snap® survey software was used. This allowed scannable questionnaires to be developed, cutting down on data entry error and time. The data was then exported to the Statistical Package for the Social Sciences for analysis.

II. LITERATURE REVIEW

OLDER PEOPLE AND MOBILITY

The expected increase in the number of older drivers has resulted in increased interest in the issues that face this population. This is an issue not only in the United States, but internationally as well (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). Many older people eventually must either adapt their driving behavior as they age or stop driving altogether. Driving reduction or cessation clearly causes changes in lifestyle (Bauer, Rottunda and Adler 2003). Mobility, or the ability to travel from one place to another, is the manner in which people maintain their connection to society. Ready access to friends and family, health care, social and recreation activities, and goods and services are necessary to fully participate in everyday life (Coughlin 2001). The decreased ability or inability to do this is difficult for older people. Emotional responses can include feelings of loss of independence and spontaneity, loss of control, and fear of being a burden to families (Bauer, Rottunda and Adler 2003; Coughlin 2001; Adler and Rottunda 2006). As well, people who stop driving may experience depression, loneliness, feelings of isolation, and even illness (Bauer, Rottunda and Adler 2003). These emotions have also been associated with adverse social conditions, including fewer out-of-home activities (Bauer, Rottunda and Adler 2003; Hildebrand 2003; Marottoli, Carlos F. Mendes de Leon, and Glass 2000).

Older people engage in local travel for a variety of reasons. The largest portion of trips is for social and recreational reasons, such as visiting friends. They also take trips for shopping. Compared to younger people, seniors take more trips for medical purposes and for religious reasons, but fewer for work and work-related trips. They do most of their daily driving in mid-day to avoid traffic as compared to younger people who drive more in the morning, at lunch time, and in the after-work peak (Collia, Sharp and Giesbrecht 2003).

Effective transportation arrangements contribute to older persons' social integration by facilitating community participation, social interaction, access to goods and services (Glasgow and Blakely 2000), and medical access (Collia, Sharp and Giesbrecht 2003). Mobility for older people should include the following (Alsnih and Hensher 2003):

- access to places of desire such as visiting family and friends,
- the psychological benefits of travel where social contact and independence are important aspects of mobility,
- the benefits of physical movement,
- maintaining social networks, and
- potential travel.

Issues among older drivers include safety concerns, barriers to driving, the manner in which they are able to adapt their driving practices to compensate for problems they

encounter, and reasons for reducing or ceasing to drive (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). This review will primarily focus on the barriers and problems older people experience with respect to transportation and ways in which they adapt.

Transportation and Adapting to Aging

Driving less. Many studies of older people have found that there is a correspondence between aging and a reduction in driving. In the U.S., a lower percentage of older adults report to be drivers than those less than 65 years old. Older people also travel less both locally and long-distance. Older adults make fewer trips per day than younger adults and also travel shorter distances (Collia, Sharp and Giesbrecht 2003; Houser 2005). A study of older people in three European countries found that a large percentage of respondents reduced their amount of driving as they aged, with a correlation between age and driving reduction including both driving less often and driving less distance (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). There also appears to be differing impacts on women than men, with women reducing driving to a greater extent than men (Bauer, Rottunda and Adler 2003; Collia, Sharp and Giesbrecht 2003; Dellinger, Sehgal, Sleet and Barrett-Connor 2001; Gallo, Rebok and Lesikar 1999; Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). This also is the case with people who have lower incomes: they reduce their driving to a greater extent than those with higher incomes (Straight 1997).

Older people report a number of difficulties related to road conditions. A study of older drivers in Rhode Island found that drivers noted, in order of frequency, poor road conditions, traffic congestion, faded or worn lane markings, headlight glare, fast traffic, construction zones, merging or switching lanes, driving at night, entering or exiting highways, narrow lanes, and the ability to see signals and signs as potential problems (Nelson and Bridges 2006). Other studies have also noted problems among older drivers with respect to inconsiderate drivers, congestion, night driving, poor roads, driving costs, crime and fast traffic (Stowell-Ritter, Straight and Evans 2002). They reported that the biggest improvement needed is adequate and timely road maintenance (Nelson and Bridges 2006).

Avoiding difficult traffic situations. Older people report adapting driving to aging by avoiding difficult traffic situations (Houser 2005). This includes avoiding driving at dusk and dawn or at night (Collia, Sharp and Giesbrecht 2003; Houser 2005; Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Straight 1997); driving in bad road conditions (Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); driving in complicated situations such as complex intersections or junctions (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); driving during heavy traffic times (Collia, Sharp and Giesbrecht 2003; Houser 2005; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Straight 1997); driving on busy roads (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); driving long distances

(Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); driving in unfamiliar areas (Houser 2005; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); and driving on freeways, highways, and interstates (Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). As with driving reductions, women are more heavily influenced by avoidance of difficult situations than men (Adler and Rottunda 2006; Alsnih and Hensher 2003; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). At least in part, this is due to the longer life expectancy of women as well as higher incidents of disability among older women (Alsnih and Hensher 2003).

Transportation alternatives. Personal vehicles remain the primary form of transportation for older people (Collia, Sharp and Giesbrecht 2003; Houser 2005; Nelson and Bridges 2006; Adler and Rottunda 2006). Most older people report that driving is the primary way they get where they need to go (Stowell-Ritter 2006; Straight 1997). There is a strong preference for automobile based transportation and older people express reservation about most alternates to driving (Coughlin 2001). Older people feel that automobiles are reliable, convenient, secure, flexible and allow spontaneity (Coughlin 2001). Though various forms of alternative transportation exist for older people, they are often viewed as less desirable than driving oneself (Bauer, Rottunda and Adler 2003; Glasgow and Blakely 2000) and some seem to be more acceptable than others. For some, finding alternatives can be difficult. Older people note that having to rely on alternative transportation requires planning ahead (Bauer, Rottunda and Adler 2003; Adler and Rottunda 2006).

In general, public transportation such as buses is not viewed favorably (Adler and Rottunda 2006; Alsnih and Hensher 2003) and use is fairly low (Collia, Sharp and Giesbrecht 2003; Nelson and Bridges 2006; Stowell-Ritter 2006). Many older people feel such options are neither adequate nor responsive to an older person's needs. They are described as inconvenient due to fixed schedules and stops or as difficult to use due to seniors' physical impairments (Nelson and Bridges 2006; Adler and Rottunda 2006; Stowell-Ritter, Straight and Evans 2002; Straight 2003). A primary issue with public buses is they require a certain level of functional capability some older people do not have (Glasgow and Blakely 2000). Older people are also concerned with safety when using public transportation (Nelson and Bridges 2006; Adler and Rottunda 2006; Stowell-Ritter, Straight and Evans 2002; Straight 2003). Other problems noted with respect to public transportation include lack of shelter and a place to sit while waiting, that it is time consuming, the high cost, and poor station and vehicle maintenance (Nelson and Bridges 2006; Stowell-Ritter 2006). Even so, there has been an increase in use of public transportation by those 75 and older, but this tends to be restricted to those with higher education and income living in higher residential density areas (Glasgow and Blakely 2000; Alsnih and Hensher 2003). Lack of information about community transportation resources can exacerbate perceived problems (Coughlin 2001; Nelson and Bridges 2006) and in rural areas, public transportation is limited (Glasgow and Blakely 2000; Houser 2005). Senior residences, senior centers, and other similar facilities provide transportation services. These services are viewed

more favorably than public transportation (Stowell-Ritter, Straight and Evans 2002), but are often limited in geographic coverage and include limited destinations (Glasgow and Blakely 2000; Adler and Rottunda 2006).

Most older people rely on friends and family for transportation when they are unable to drive (Bauer, Rottunda and Adler 2003; Glasgow and Blakely 2000; Adler and Rottunda 2006; Stowell-Ritter 2006) and see this as the preferred alternative to driving (Coughlin 2001). However, they often are concerned that they will become a burden to family and friends (Bauer, Rottunda and Adler 2003; Coughlin 2001; Adler and Rottunda 2006; Stowell-Ritter, Straight and Evans 2002). Rides from children are often held in reserve for emergencies or for when the need is greatest. An increasing problem is the dispersion of families with adult children living far from their aging parents (Bauer, Rottunda and Adler 2003). Another issue is related to the life-styles of children with work and child-care demands (Alsnih and Hensher 2003). Many older people feel that riding with friends is preferable to family as it provides more of a social experience (Bauer, Rottunda and Adler 2003). Older people also allow someone other than a spouse to drive their cars thereby allowing them to use their own vehicle without the feelings of dependency or feeling like a burden to others. However, there are safety issues with this practice. Often, the other driver is an adult child, spouse of a child, or grandchild who does not own his or her own car and is not on the older person's insurance policy (Hermanson 2005).

A number of older people report that they walk where they want to go. Walking appears to be more prevalent than taking public transportation though primarily in urban areas (Nelson and Bridges 2006). Walking is mentioned more frequently as a transportation alternative among older people than among younger people (Collia, Sharp and Giesbrecht 2003). Trip chains are another response to help reduce driving. This involves a sequence of stops on a trip to fulfill several purposes and minimize travel time and distance (Hensher and Reyes 2000; Alsnih and Hensher 2003).

Older people who are best able to meet their needs seem to have one or more of the following sources of support (Alsnih and Hensher 2003):

- spouses or others who drive,
- live with children or have children who live nearby,
- possess sufficient financial resources to purchase transport services,
- are strongly involved in a religious institution,
- reside in communities well serviced by transportation options for non-drivers,
- are physically able to use public transportation, and
- have reduced their activities and expectations to better adapt to their present situation.

Reasons for Transportation Adaptations

The literature suggests that there are two general models related to the mobility of older people. One suggests that physical (poor health and disability) and environmental factors (such as distance and population density) are barriers to the use of transportation

alternatives. As well, a number of socio-demographic variables influence transportation (Rosenbloom 2001). A second model proposes that several qualities of mobility affect well-being, and these are moderated by socio-demographics and the site (Carp 1988).

Several studies have considered the reasons older people reduce or stop driving. Transportation problems increase as people age and experience health problems and the loss of social networks (Glasgow and Blakely 2000). The predominant reasons tend to be less need for driving, often due to retirement from work (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Straight 1997) and health reasons (Bauer, Rottunda and Adler 2003; Colli, Sharp and Giesbrecht 2003; Gallo, Rebok and Lesikar 1999; Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003). Other reasons include: difficulty with parking (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); economic reasons, including the cost of gasoline (Houser 2005; Kalata 2005; Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Stowell-Ritter 2006; Straight 1997); hectic traffic (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Stowell-Ritter 2006); difficulty handling a car (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); having someone to do the driving (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); not having a car (Glasgow and Blakely 2000; Houser 2005; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); having a frightening experience while driving (Adler and Rottunda 2006); influence by family (Adler and Rottunda 2006); influence by physicians (Adler and Rottunda 2006), and inconsiderate drivers (Stowell-Ritter 2006).

Studies also have been conducted using quantitative measures to determine predictor variables for driving status. Significant relationships have been found between driving reduction and increasing age (Alsnih and Hensher 2003; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); chronic health conditions and mobility (Kostyniuk and Shope 2003; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); increasing mobility related problems (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); being retired (Raitanen, Tormakangas, Mollenkopf and Marcellini 2003); participation in leisure activities, both more or less depending on the study (McKnight 2003; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003).

Summary

There seems to be a trend towards driving reduction and avoiding difficult traffic conditions, and finally driving cessation, as people get older (Dellinger, Sehgal, Sleet and Barrett-Connor 2001; Hakamies-Blomqvist 2006; Adler and Rottunda 2006; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Stowell-Ritter 2006; Stowell-Ritter, Straight and Evans 2002). Thus, transportation becomes increasingly problematic as people age. Results of research suggest that decisions to reduce or cease driving are complex and affected by many factors. The most influential

reasons seem to be medical problems or deteriorating health (Bauer, Rottunda and Adler 2003; Dellinger, Sehgal, Sleet and Barrett-Connor 2001; Persson 1993; Gebers and Peck 1992; Raitanen, Tormakangas, Mollenkopf and Marcellini 2003; Stowell-Ritter, Straight and Evans 2002).

The effects of driving cessation can be emotional, social and even physical. Driving cessation affects a person's ability to function independently and participate in the community thereby negatively influencing quality of life (Bauer, Rottunda and Adler 2003; Alsnih and Hensher 2003). High levels of mobility are associated with access, choice, opportunity and freedom (Burns 1999; Alsnih and Hensher 2003). As people get older and have more physical problems, they also experience increasing transportation problems and their satisfaction with their ability to get to the places they need and want to go decreases (Stowell-Ritter 2006).

From a policy perspective, a focus on mobility and accessibility initiatives that benefit older people would include transportation options that provide a sense of independence and security and allow an individual a sense of dignity (Alsnih and Hensher 2003). Older people respond most favorably to transportation options that are convenient and flexible, allow a certain level of independence, are inexpensive, provide social contact with others, and are accessible to those with physical limitations and disabilities. Negative attitudes are found toward options that force people to rely on others, are difficult for disabled people to access, are expensive, and are restrictive of spontaneity in trip taking (Glasgow and Blakely 2000). Buses, for example, need to be physically easy to negotiate, have schedules convenient for older people, and pick-up and drop-off points the same to eliminate the need to walk between stops (Glasgow and Blakely 2000). Other options include networks of volunteer drivers who provide door-to-door on-demand service (Houser 2005). The primary issue is that in many areas, adequate alternatives to the car for the elderly do not exist.

III. INTERVIEW, DIARY AND SURVEY RESULTS

Results from the diaries, surveys and interviews are presented in this section.

INTERVIEWS WITH MOBILITY IMPAIRED SENIORS

Interviews with mobility impaired seniors were conducted with 14 women and six men. Two of the interviewees are in their 40s, eight in their 60s, and five each in their 70s and 80s. Of this group, 15 live alone, three live with a spouse and child, and two with a child.

All the interviewees must go to the doctor and most go to the pharmacy quite regularly (Table 1). When they need to go somewhere, eight have a family member who can take them (a son or daughter, in one case a niece and in another a parent). The interviewees also reported that other people or services are available to assist them:

- Friend (3)
- Neighbor (2)
- Van service (8)
- Yellow cab (4)
- Bus (2)
- Medical transport (3)
- Other (4):
 - HandiCar (2)
 - Volunteer driver (1)

Table 1. Places interviewees need to go

| Place to go | Frequency | How often |
|-------------------------|-----------|--|
| Doctor | 20 | Most respondents at least every 3 months or more, some several times a month |
| Pharmacy | 12 | Most respondents 2 times a month |
| Other medical | 5 | Variable |
| Social events | 3 | Variable |
| Senior center | 0 | |
| Visit family or friends | 3 | Variable |
| Grocery store | 10 | Once a week (sometimes caregiver goes) |
| Church | 3 | Variable |
| Other | 4 | Variable |

The interviewees were asked if they have a contact in case of emergency. Twelve reported that they do (usually a son or daughter, in one case a niece, and in another a neighbor). One named 911.

Nine of the interviewees said they need to pay for transportation at least some of the time. Most appear to be using VanTran, which charges a fairly small fee. Only four

respondents commented that they use public transportation. When asked what would make it easier to use transportation services, the following comments were made:

- If they had any here in Catalina.
- It works fine for me.
- It's not possible, I have a catheter.
- If they came to my front door.
- Make faster.
- Don't know.
- My health is too bad to wait in the sun for a bus.
- I am down a little road over a mile from the bus stop. I would have to take my scooter there and I don't think they could load my scooter on the bus.
- If the bus could come down my side street and had a wheelchair lift and the driver could put me in and out of the bus. I don't think that will ever happen.
- I can't take the bus--no way.
- Sometimes I'll wait three solid hours waiting for yellow cab to come pick me up.
- If there were more buses that come by where I live and close enough I didn't have to walk far and stand so long.
- The routes are not convenient (3 comments).
- Standing in the heat.
- Not sure.

When asked what they do if there is no one available to provide transportation, the interviewees said:

- If it isn't too far I will walk.
- I take the bus.
- I don't go anywhere (9 comments).
- I don't go anywhere unless I can ride my scooter to the corner store.
- If VanTran can't accommodate me I don't go.
- I don't go. I wait until something works out so I can go or someone can go for me.
- Call cab.
- Loose my appointment.
- VanTran.

When asked what problems they have had related to transportation, interviewees noted:

- I just wish there were choices up here.
- None right now. I'm still able to get around...I am slow.
- I manage. If it's a bad day I just stay home.
- Waiting.
- Short notice.
- Too many to count.
- It's just too much trouble.
- If my daughter can't get away from work in the mines to take me somewhere I need to be.
- The seats of buses cut my circulation and when I get up I can't walk.
- Long time to be picked up.
- Waited for more than 3 hours at doctors' appointments and dialysis.

Finally, interviewees were asked to describe an example of a transportation problem they had at some point. A few shared an experience:

- There just isn't any, and I don't have a car. My children live too far away to help out. I wish someone could help.
- Was waiting in dialysis for over 4 hours.
- Waited at rehab for 4-5 hours.
- I missed my yellow cab return trip home and had to wait 5 hours at doctor's office - that did it for me for awhile.
- I have friends and family who have never failed me yet.
- I'm fine now. At first I had a lot of problems but then I found VanTran.
- They forget about an appointment to take me somewhere and I'm late, and it is a long wait when that happens. I was at the Dr. office 7 hours one day waiting for them to come pick me up.
- Handi-car is perfect. I have no way to do anything of my own. My friends can't drive anymore. I have no way to get anywhere other than my medical appointments.
- Where schedule on time never show up both times.

TRAVEL DIARIES OF SENIOR CENTER ATTENDEES

Respondents for the diary study were recruited from senior centers in several communities in Pima County (Tables 2 and 3). This group can not be assumed to represent seniors in general, but can provide some insight into the driving behavior and transportation needs of older people in the county. (N = number of respondents.)

Table 2. Residence of respondents (N=130)

| City of Residence | Percent |
|-------------------|---------|
| Ajo | 6.4 |
| Benson | .9 |
| Green Valley | 15.5 |
| Marana | 9.1 |
| Tucson | 68.1 |

Table 3. Senior centers attended by respondents (N=278)

| Senior Center | Percent |
|---------------|---------|
| El Rio | 13.8 |
| Armory | 12.3 |
| Quincy | 16.2 |
| El Pueblo | 10.8 |
| East Side | 6.2 |
| Marana | 8.5 |
| Udall | 13.8 |
| Green Valley | 13.1 |
| Ajo | 5.4 |

Profile of Respondents

The respondents from the senior centers are mostly women and range in age from 52 to 97, with an average of 73 years (Tables 4 and 5). Most are retired (Table 6). Their education level is fairly low, with most having high school level educations or less (Table 7). Very few have college level education. Incomes are also low, with nearly a third making \$20,000 or less per year (Table 8). Most live alone or with a spouse (Table 9), and rate their health as fair or good (Table 10), and report that their participation in leisure activities has stayed about the same over the past two years (Table 11).

Table 4. Gender of respondents (N=126)

| Gender | Percent |
|---------------|----------------|
| Female | 77.0 |
| Male | 23.0 |

Table 5. Age of respondents (N=116)

| Age | Percent |
|------------|----------------|
| 50s | 3.5 |
| 60s | 34.3 |
| 70s | 66.1 |
| 80s | 26.7 |
| 90s | 3.5 |
| Mean age | 73 |

Table 6. Retirement status (N=126)

| Retired | Percent |
|----------------|----------------|
| Yes | 87.3 |
| No | 12.7 |

Table 7. Education level (N=123)

| Education | Percent |
|--------------------------|----------------|
| Less than High School | 34.1 |
| High School Grad | 22.8 |
| Some College/Tech School | 26.8 |
| 4-year Degree | 9.8 |
| Advanced Degree | 6.5 |

Table 8. Income (N=110)

| Income | Percent |
|--------------------|----------------|
| Less than \$20,000 | 65.5 |
| \$20,000-39,000 | 26.4 |
| \$40,000-59,000 | 2.7 |
| \$60,000-79,000 | 2.7 |
| \$80,000-99,000 | 0.9 |
| \$100,000-199,999 | 0.9 |
| \$120,000-139,999 | 0.9 |

Table 9. Household composition (N=122)

| Who Lives With You | Percent |
|---------------------------|----------------|
| No One | 48.4 |
| Spouse | 27.9 |
| Other | 12.3 |
| Adult Children | 6.4 |
| Children | 5.7 |
| Caregiver | 3.3 |
| Grandchildren | 2.5 |

Table 10. Health status (N=117)

| Your Health | Percent |
|--------------------|----------------|
| Poor | 7.7 |
| Fair | 45.3 |
| Good | 37.6 |
| Excellent | 9.4 |

Table 11. Changes in participation of leisure activities over the last two years (N=106)

| Amount | Percent |
|------------------|----------------|
| More than before | 27.4 |
| Same as before | 41.5 |
| Less than before | 31.1 |

Most of the respondents are still driving, though a substantial number are not (Table 12). Most also still own a vehicle, but many do not (Table 13).

Table 12. Driving status of respondents (N=125)

| Drive | Percent |
|--------------|----------------|
| Yes | 59.2 |
| No | 40.8 |

Table 13. Vehicle ownership of respondents (N=123)

| Own Vehicle | Percent |
|--------------------|----------------|
| Yes | 61.0 |
| No | 39.0 |

Those respondents that still have a spouse (n=69) indicated that the spouse does not drive, is retired, and is generally in fair to good health (Tables 14-16).

Table 14. Driving status of respondent's spouse (N=69)

| Spouse Drive | Percent |
|---------------------|----------------|
| Yes | 44.9 |
| No | 55.1 |

Table 15. Retirement status of spouse (N=63)

| Spouse Retired | Percent |
|-----------------------|----------------|
| Yes | 57.1 |
| No | 42.9 |

Table 16. Health status of spouse (N=44)

| Health of Spouse | Percent |
|-------------------------|----------------|
| Poor | 20.5 |
| Fair | 27.3 |
| Good | 40.8 |
| Excellent | 11.4 |

Changes in Driving Behavior

More than half of the respondents from senior centers indicated they have reduced the amount of driving they do in the past two years (Table 17). Almost a third has stopped driving all together (Table 18). They noted that they have changed their driving behavior in a number of specific ways since getting older (Table 19). The highest percentage reported that they avoid driving at night, avoid high traffic times, drive fewer miles, avoid driving long distances, and avoid driving in bad road conditions. The most common reason they provided for changes in driving is that they no longer work (Table 20). They also noted health reasons and the cost being too high. Few mentioned difficulty handling the car or not trusting their driving ability.

Table 17. Driving reduction (N=81)

| Reduced Driving | Percent |
|------------------------|----------------|
| Yes | 53.1 |
| No | 46.9 |

Table 18. Driving cessation (N=49)

| Stopped Driving | Percent |
|------------------------|----------------|
| Yes | 32.7 |
| No | 67.3 |

Table 19. Changes in driving habits (N=76)

| Altered Driving Habits as Gotten Older | Percent |
|---|----------------|
| Avoid driving at night | 29.2 |
| Avoid high traffic times | 25.4 |
| Drive fewer miles | 23.9 |
| Avoid driving long distances | 22.3 |
| Avoid driving in bad road conditions | 20.8 |
| Drive fewer days | 16.9 |
| Drive less time | 16.2 |
| Do not drive during bad weather | 16.2 |
| Do not drive in unfamiliar areas | 15.5 |
| Avoid driving on busy roads | 13.9 |
| Stopped driving altogether | 12.3 |
| Avoid driving on Interstates/Highways | 10.0 |
| Never drive at night | 9.2 |
| Other | 9.2 |

Table 20. Driving reduction (N=79)

| Reduced Amount of Driving | Percent |
|----------------------------------|----------------|
| No longer work | 30.0 |
| Health reasons | 19.2 |
| Costs too much | 18.5 |
| Someone else drives | 11.5 |
| Traffic too hectic | 10.8 |
| No vehicle | 10.0 |
| Do not trust my ability | 6.2 |
| Car is difficult to handle | 3.9 |
| Do not need to drive | 3.9 |
| Parking is a problem | 3.1 |

Daily Trip Behavior

Travel diary respondents were assigned a day for each month of the year. They were asked to indicate where they went and why they went there for that one day each month. They were allowed to report from one to four trips out of the house each of those days. Table 21 shows the most frequent reasons they went out and Table 22 shows the purposes of those trips.

The most frequent daily destination of respondents is the senior center, obviously an artifact of the sample that would not emerge with a general population of seniors. This is followed by trips to a store or grocery store. Dining, traveling, and going to church are the next most common destinations. The most frequent trip purpose is going out for meals. This finding is likely more common among the senior center respondent than it would be among a general group of respondents as many go to the senior center to eat lunch. This is followed by going out for a variety of social events or meetings, running errands, and buying food or other shopping.

Table 21. Daily destinations of seniors

| Destination | Frequency | Destination | Frequency |
|--------------------|------------------|--------------------|------------------|
| Bakery | 2 | Mortuary | 1 |
| Bank | 18 | Movie | 3 |
| Bus | 1 | No Trips | 47 |
| Business | 18 | Park | 40 |
| Camping | 1 | Pharmacy | 13 |
| Casino | 2 | Polling Place | 1 |
| Church | 62 | Pool | 2 |
| Dining | 89 | Post Office | 26 |
| Doctor | 49 | Rehab Center | 1 |
| Errand | 7 | Residence | 68 |
| Farm | 1 | Salvation Army | 7 |
| Food Bank | 4 | School | 7 |
| Gas Station | 3 | Senior Center | 288 |
| Grocery Store | 90 | Social Event | 13 |
| Gym | 9 | Social Meeting | 17 |
| Hospital | 16 | Store | 130 |
| Hotel | 2 | Tax Office | 1 |
| Lab | 3 | Traveling | 76 |
| Library | 11 | Visiting | 2 |
| Lunch | 1 | Walking | 2 |
| | | Work | 9 |

Table 22. Purpose of daily trips

| Purpose | Frequency | Purpose | Frequency |
|------------------------------|------------------|----------------------|------------------|
| Appointment | 16 | Health | 1 |
| Auto, maintenance | 5 | Holiday | 1 |
| Bank | 1 | Meals | 229 |
| Baptism | 1 | Medical | 36 |
| Buy food | 93 | Medicine | 12 |
| Catch bus | 1 | Oil Change | 1 |
| Choir | 2 | Park | 1 |
| Church | 4 | Pay bills | 1 |
| Class/education/ teaching | 8 | Post Office | 1 |
| Dining | 1 | Pumpkin | 1 |
| Donating | 1 | Residence | 1 |
| Entertainment | 36 | Rest | 1 |
| Errands | 103 | Shopping | 70 |
| Exercising | 50 | Social event/meeting | 32 |
| Funeral | 3 | Socializing | 140 |
| Garage sales | 2 | Store | 3 |
| Garbage | 1 | Visiting | 14 |
| Get gas | 10 | Volunteer | 24 |
| Grocery store | 2 | Voting | 1 |
| Haircut | 8 | Work | 17 |
| Have fun | 2 | Worship | 26 |

When seniors leave home, they most often drive their own cars (Table 23). A distant second form of transportation is riding with another person. Public transportation is not used very often. When respondents do have to take alternative forms of transportation, they usually do not have to pay for the ride (Table 24). Respondents reported that they drive anywhere from one to 250 miles during any one trip during the day. The average number of miles is 15 per trip and the median is about eight miles. They most often leave home in the morning, either during “rush hour” or later in the morning and return in early afternoon (Tables 25 and 26). It is notable that the seniors in this group rarely are out of the house at night (after 7:00 p.m.)

Table 23. Form of transportation used

| Transportation | Percent |
|------------------------------------|----------------|
| My vehicle that I drove | 79.9 |
| Someone drove me in their vehicle | 15.8 |
| Senior Center transportation | 12.2 |
| Bus | 10.1 |
| My vehicle that someone else drove | 8.3 |
| Walk | 6.8 |
| Other | 6.1 |
| Other public transportation | 4.0 |
| Dial-a-ride/VanTran | 2.2 |
| Taxi | 0.0 |
| Bicycle | 0.0 |

N=278 trips; respondents were able to select all that apply

Table 24. Pay for the ride

| Pay for transportation | Percent |
|-------------------------------|----------------|
| Yes | 37.0 |
| No | 63.0 |

N=289

Table 25. Times left house

| Travel times | Percent |
|---|----------------|
| Early morning (before 7:00 a.m.) | 3.0 |
| Morning rush-hour (7:01 a.m.-9:00 a.m.) | 35.5 |
| Late morning (9:01 a.m.-noon) | 33.6 |
| Afternoon (noon-7:00 p.m.) | 26.8 |
| Night (7:01 p.m. on) | 1.1 |

N=634 trips

Table 26. Times returned to house

| Travel times | Percent |
|---|----------------|
| Early morning (before 7:00 a.m.) | 1.4 |
| Morning rush-hour (7:01 a.m.-9:00 a.m.) | 1.0 |
| Late morning (9:01 a.m.-noon) | 19.2 |
| Early afternoon (noon-4:00 p.m.) | 49.2 |
| Late afternoon (4:01 p.m-7:00 p.m.) | 21.0 |
| Night (7:01 p.m. on) | 8.4 |

N=510 trips

The reasons respondents do not go out are quite similar to those found in the general survey (reported later in this report) as far as rank goes, though they tend to note more barriers. Usually when respondents did not go somewhere on a particular day, it was because they did not need to go out (Table 27). They also noted gas being too expensive and not feeling well as barriers. They were more likely to indicate they were inhibited by bad weather, not driving at night, and too much traffic, than were those in the general population. When weather was an issue, respondents indicated it was too cold in the winter, or too hot in the summer. “Other” reasons varied but were usually related to health issues.

Table 27. Reasons for not going out

| Reason | Percent |
|---|----------------|
| Didn't need to go anywhere | 24.8 |
| Gasoline too expensive | 11.8 |
| Not feeling well | 11.1 |
| Other | 9.2 |
| Bad weather | 7.8 |
| Do not drive at night | 7.2 |
| Too much traffic | 7.2 |
| No one available to drive me | 5.9 |
| Unable to leave house due to health problems | 5.2 |
| Lack of adequate/convenient public transportation | 3.3 |
| Unreliable vehicle | 2.6 |
| Public transportation too expensive | 2.0 |
| Poor road conditions | 2.0 |

N=153 responses

Comments relative to barriers included:

- Costco, I walked, belt broke on air conditioner cost \$383 to fix, 1/2 each way, cab back.
- We need to go out one form or another to feel better.
- If gas was not so expensive we could solve our problem and feel more satisfied.
- I have had no problems with VanTran program. They are very punctual and attentive. They all transport us and care for us well.
- I have no problem with services because VanTran is very attentive and all give good service.
- I think we should solve the problem with help that the price of gas isn't so high for being able to go out daily to our businesses.
- Lots of traffic Pantano and Broadway--no one works!!
- My car was in the shop.
- No A/C in the van, too hot to go anywhere until we get it fixed.
- One day senior center for 2 meals.

- Suburban had hit and run damage to left passenger door. Had sub in shop for repairs 8/27-8/31 used rental car that time got sub back Fri 8/31 everything looks and works fine.
- Thanks to God, I have no impediments.
- The transportation service is excellent. They provide me very good service. They always arrive for me at the time I indicate. Thanks for the good service.

Weekly Trip Behavior

Diary respondents were asked a few questions about their weekly travel behavior in addition to the daily questions. Respondents reported that on a weekly basis, they tend to go somewhere from zero to 40 times with an average of eight times per week. The types of places they go are summarized in Table 28. They most often go to the senior center though this is not typical of seniors in general. They also go to the store or grocery store quite often, as well as out to eat. The respondents go to the doctor, various events, to visit friends, to visit family, and to church fairly frequently. They rarely noted encountering problems with transportation; but when they did they usually indicated that accidents or traffic are the primary concerns (Table 29).

Table 28. Weekly destinations

| Destination | Frequency | Destination | Frequency |
|--|------------------|----------------------|------------------|
| Airport | 4 | Meetings | 18 |
| Bank | 24 | Nursing home | 1 |
| Baseball game | 2 | Out of town | 8 |
| Camp | 3 | Park | 9 |
| Casino | 7 | Parks and recreation | 1 |
| Chamber of commerce | 1 | Post office | 33 |
| Church | 48 | Recycle | 2 |
| Country club | 1 | Salvation Army | 12 |
| Dining | 102 | School | 11 |
| Doctor | 90 | Senior center | 283 |
| Events (fashion show, zoo, dances, golf, fishing, pool, sight seeing, Oct. fest, concerts, movies, museum) | 71 | Shuffleboard | 1 |
| Exercise | 18 | Store | 121 |
| Food bank | 1 | VFW | 7 |
| Gas station | 11 | Visit family at work | 4 |
| Grocery store | 196 | Visit family's house | 49 |
| Hair appt. | 3 | Visit friends | 2 |
| Hospital | 23 | Visit friend's house | 59 |
| Insurance | 1 | Volunteer work | 7 |
| Library | 10 | Work | 25 |
| | | Yard sale | 1 |

Table 29. Transportation related problems

| Problems encountered | Frequency |
|--|------------------|
| Accidents on road | 8 |
| Almost in an accident | 2 |
| Bus route not flexible (too restrictive) | 2 |
| Car in shop | 5 |
| Construction | 4 |
| Gas prices too high | 4 |
| Had to use taxi & too expensive | 1 |
| No bus service | 2 |
| Surgery (can't drive) | 1 |
| Traffic | 7 |

MAIL SURVEY OF PIMA COUNTY SENIORS

Results from the mail survey are presented in this section. The purpose of the mail survey was to gather transportation related information from seniors in Pima County. Respondents live in various zip codes within the Pima County boundaries.

Nature of the Sample – Demographics

The demographics portion of the questionnaire was completed by 760 respondents. The average age of respondents is 70.4 years old, with 30.9% of respondents being female, and 69.1% being male. It is important to note that sample gender proportions probably do not reflect actual gender proportions among the general population given biases in the names attached to addresses which are more often male. The majority of respondents are either married or have a partner with whom they live (Table 30). About 8% of respondents have adult children living within their households (Table 31).

Table 30. Gender and age of respondent (N=732)

| Gender/age | Percent |
|-------------------|----------------|
| Female | 30.9 |
| Male | 69.1 |
| Mean age | M=70.4 |

Table 31. Other members of household (N=733)

| Household members | Percent |
|----------------------------------|----------------|
| Spouse/partner | 63.8 |
| No one | 29.9 |
| Adult children | 8.3 |
| Other family member | 4.1 |
| Children under 18 years old | 2.7 |
| Grandchildren under 18 years old | 1.9 |
| Other | 1.5 |
| Caregiver | .4 |

The following tables provide information about the education level, employment status, ethnicity and household income of the respondents. Respondents have almost equal levels of having only a high school education (20.1%), some college (24.9%), four year college degree (21.1%), and advanced college degree (23.7%). A very small number (4.4%) received a degree from technical school (Table 32). The majority are retired (71.8%), with 17.5% still employed full-time (Table 33). The most identified racial or ethnic group is European American/White (90.3%) (Table 34). Just over one quarter of the respondents (26.9%) reported earning between \$20,000 and \$39,999 annually. One fifth (20%) report earning between \$40,000 and \$59,999 annually with the next highest income level being less than \$20,000 per year (16.7%) (Table 35).

Table 32. Education level of respondents (N=735)

| Level of education | Percent |
|--------------------------------|----------------|
| Less than high school graduate | 5.9 |
| High school graduate | 20.1 |
| Some college | 24.9 |
| Technical school degree | 4.4 |
| Four year college degree | 21.1 |
| Advanced college degree | 23.7 |

Table 33. Employment status of respondents (N=731)

| Employment status | Percent |
|--------------------------|----------------|
| Retired | 71.8 |
| Employed full-time | 17.5 |
| Employed part-time | 9.8 |
| Homemaker | 5.2 |
| On disability | 5.1 |
| Other | 3.0 |

Table 34. Ethnicity/race of respondents (N=729)

| Race/ethnicity | Percent |
|-------------------------|----------------|
| European American/White | 90.3 |
| Hispanic/Latino | 7.7 |
| African American/Black | 1.2 |
| American Indian | 1.5 |
| Asian/Pacific Islander | .8 |
| Other | .8 |

Table 35. Annual household income before taxes (N=669)

| | Percent |
|---------------------|----------------|
| Less than \$20,000 | 16.7 |
| \$20,000 - \$39,999 | 26.9 |
| \$40,000 - \$59,999 | 20.0 |
| \$60,000 - \$79,999 | 14.1 |
| \$80,000 - \$99,999 | 8.4 |
| \$100,000 or more | 13.9 |

The majority of respondents are still experiencing good health (47.8%), or very good health (28.0%), with almost one fifth (19.5%) experiencing fair health (Table 36). Most (61.2%) have also been able to maintain the same level of leisure activity participation over the past couple of years, though somewhat over a quarter report less participation (Table 37).

Table 36. Current health status of respondent (N=738)

| Current health | Percent |
|-----------------------|----------------|
| Poor | 4.7 |
| Fair | 19.5 |
| Good | 47.8 |
| Very good | 28.0 |

Table 37. Changes in participation of leisure activities over the last two years (N=734)

| Amount | Percent |
|------------------|----------------|
| More than before | 12.0 |
| Same as before | 61.2 |
| Less than before | 26.8 |

Driving Behavior of Respondents

Most of the respondents of this study (94.4%) currently have a driver's license and continue to drive (91.3%) (Tables 38 and 39). The majority of those who do not currently have a driver's license (76.9%) previously had one (Table 40). Roughly two-thirds (65.9%) of respondent households have at least one person who drives with 87.3% having someone in the household who owns a vehicle (Tables 41 and 42).

Table 38. Have current driver's license (N=755)

| Has license | Percent |
|--------------------|----------------|
| Yes | 94.4 |
| No | 5.6 |

Table 39. Currently drives (N=748)

| Drive | Percent |
|--------------|----------------|
| Yes | 91.3 |
| No | 8.7 |

Table 40. Former driver (N=65)

| Have had license | Percent |
|-------------------------|----------------|
| Yes | 76.9 |
| No | 23.1 |

Table 41. At least one other person in household drives (N=753)

| Someone drives | Percent |
|-----------------------|----------------|
| Yes | 65.9 |
| No | 34.1 |

Table 42. Someone in household owns a vehicle (N=753)

| Someone owns vehicle | Percent |
|-----------------------------|----------------|
| Yes | 87.3 |
| No | 12.7 |

As they have gotten older, respondents have altered their driving habits in many ways. In the past two years, 42.3% of respondents reduced the amount of driving they did. Only 8.6% have stopped driving completely in the past two years, showing that the majority of respondents are still driving (Tables 43 and 44). Some more specific driving behavior changes were noted, as well. While 10.1% have stopped driving completely (includes more than the past two years), about 24% report driving for less time (24.6%) and fewer

days (24.0%) during the week (Table 45). A large number of respondents report driving fewer miles per week (40.3%), avoiding night driving (43%), and avoiding driving during busy traffic times (41.6%). Also see Appendix A for comments.

Table 43. Reduced driving in past two years (N=716)

| Reduced | Percent |
|----------------|----------------|
| Yes | 42.3 |
| No | 57.7 |

Table 44. Stopped driving in the past two years (N=593)

| Stopped | Percent |
|----------------|----------------|
| Yes | 8.6 |
| No | 91.4 |

Table 45. Altered driving habits with age (N=524)

| Driving Habit | Percent |
|----------------------------------|----------------|
| Avoid driving at night | 43.9 |
| Avoid busy traffic times | 41.6 |
| Drive fewer miles per week | 40.3 |
| Avoid bad road conditions | 31.1 |
| Avoid long distances | 29.0 |
| Avoid bad weather | 27.5 |
| Drive less time during the week | 24.6 |
| Drive fewer days during the week | 24.0 |
| Avoid unfamiliar areas | 21.9 |
| Avoid busy roads | 16.8 |
| Avoid interstates/highways | 12.6 |
| Have completely stopped driving | 10.1 |
| Never drive at night | 6.5 |
| Other | 5.2 |

Of the types of transportation available, most of the respondents (89.4%) prefer to drive themselves, while many (34.8%) ride with family or a friend (Table 46). Very few use public transportation or other alternative means of transportation.

Table 46. Type of transportation used (N=726)

| Mode of transportation | Percent |
|-------------------------------|----------------|
| Drive self | 89.4 |
| Ride with family or friend | 34.8 |
| Walk | 9.2 |
| Other | 3.0 |
| Use public transportation | 2.3 |
| Transportation for disabled | 1.4 |
| Taxi | 1.4 |
| Senior or community van | 1.2 |

In a typical week, respondents report that they take between zero and 40 trips away from their residence, with the highest number of trips being four (10.7%), five (12.6%), seven (12.1%) and ten (12.4%) (Table 47). The number of times they drove themselves on these trips varies between zero and 38 times, with a larger percentage driving themselves five times (12.6%), seven times (11.4%), and ten times (12%) (Table 48).

Table 47. Number of trips away from residence to another place during a typical week (N=713)

| Number of trips | Percent | Number of trips | Percent |
|-----------------------------------|----------------|------------------------|----------------|
| 0 | 0.4 | 14 | 3.8 |
| 1 | 3.0 | 15 | 4.1 |
| 2 | 3.7 | 16 | 0.4 |
| 3 | 6.5 | 17 | 0.1 |
| 4 | 10.7 | 18 | 1.1 |
| 5 | 12.6 | 20 | 4.8 |
| 6 | 9.0 | 21 | 1.0 |
| 7 | 12.1 | 24 | 0.1 |
| 8 | 3.0 | 25 | 1.8 |
| 9 | 1.6 | 27 | 0.1 |
| 10 | 12.4 | 28 | 0.4 |
| 11 | 0.4 | 30 | 1.1 |
| 12 | 4.4 | 35 | 0.1 |
| 13 | 0.4 | 40 | 0.6 |
| Mean number of trips taken = 8.87 | | | |

Table 48. Number of times drove self for trips away from residence during a typical week (N=711)

| # drove self | Percent | # drove self | Percent |
|--|---------|--------------|---------|
| 0 | 8.7 | 14 | 3.5 |
| 1 | 2.6 | 15 | 2.7 |
| 2 | 4.8 | 16 | 0.1 |
| 3 | 6.2 | 17 | 0.6 |
| 4 | 9.0 | 18 | 0.6 |
| 5 | 12.6 | 20 | 0.1 |
| 6 | 8.5 | 21 | 3.3 |
| 7 | 11.4 | 24 | 0.4 |
| 8 | 3.8 | 25 | 0.3 |
| 9 | 1.2 | 28 | 1.3 |
| 10 | 12.0 | 29 | 0.4 |
| 11 | 0.7 | 30 | 0.1 |
| 12 | 3.2 | 35 | 0.7 |
| 13 | 0.6 | 38 | 0.1 |
| | | 45 | 0.1 |
| Mean number of times drove self = 7.61 | | | |

To get an idea of daily travel patterns, respondents were asked to report on their driving the day before completing the questionnaire. On the day prior to taking the survey, respondents reported that they left their residence to go out up to 10 times, with most taking one trip (37.2%), or two trips (34.0%) (Table 49). The majority (86.0%) drove themselves on those trips (Table 50; also see Appendix A). Of those who didn't go out that day, most (81.9%) noted the reason they did not take a trip was because they did not need to go anywhere as opposed to experiencing a barrier of some nature (Table 51).

Table 49. Number of times participant went out (N=711)

| # of trips out | Percent |
|----------------|---------|
| 0 | 12.4 |
| 1 | 37.2 |
| 2 | 34.0 |
| 3 | 10.0 |
| 4 | 3.8 |
| 5 | 1.1 |
| 6 | 0.7 |
| 7 | 0.4 |
| 9 | 0.1 |
| 10 | 0.1 |
| Mean | M=1.7 |

Table 50. Type of transportation used (N=645)

| Mode of transportation | Percent |
|-------------------------------------|----------------|
| Own vehicle, drove self | 86.0 |
| Own vehicle, someone else drove | 9.1 |
| Passenger in someone else's vehicle | 8.5 |
| Walk | 5.0 |
| Bicycle | 1.7 |
| Bus | 1.1 |
| Van service | 0.8 |
| Other | 0.8 |
| Taxi | 0.5 |
| Other public transportation | 0.3 |

Table 51. Reasons for not going out (N=166)

| Reason | Percent |
|---|----------------|
| Didn't need to go anywhere | 81.9 |
| Not feeling well | 7.8 |
| Gasoline too expensive | 6.6 |
| No one available to drive me | 5.4 |
| Unable to leave house due to health problems | 5.4 |
| Other | 5.4 |
| Do not drive at night | 4.2 |
| Lack of adequate/convenient public transportation | 3.0 |
| Unreliable vehicle | 2.4 |
| Bad weather | 1.8 |
| Public transportation too expensive | 0.6 |
| Poor road conditions | 0.6 |
| Too much traffic | 0.0 |

If unable to drive in the future, the majority of respondents (71.5%) would prefer to ride with a family member or friend in a private vehicle (Table 52). Public transportation (23.6%) and senior van service (29.4%) are much more favorable as a means of transportation than taxi (12.6%). Approximately one-fifth (19.7%) of the respondents believe that walking would be an important form of transportation should they not be able to drive in the future. A large number, more than a quarter, however, commented that they do not know how they would get around if unable to drive.

In the two months prior to the survey, the majority of respondents (67.5%) did not have a need to get a ride from someone else (Table 53). Those who did need to ride with someone else most often rode with a spouse, son or daughter, neighbor, or friend (Table 54; Appendix A). Most of the time the respondents felt that it was either no problem, or just a small problem, to find a ride with someone else. Their biggest concern was feeling that they didn't want to depend on others for rides (Table 55). Quite a large number of

respondents felt that it would be difficult to reside in their current home if they were no longer able to drive (56%) (Table 56).

Table 52. Getting around in the future if unable to drive (N=720)

| Mode of transportation | Percent |
|-------------------------------|----------------|
| Ride with family or friend | 71.5 |
| Senior van service | 29.4 |
| Don't know | 26.7 |
| Public transportation | 23.6 |
| Walk | 19.7 |
| Taxi | 12.6 |
| Other | 2.6 |

Table 53. How often rode with someone else in the last two months (N=729)

| Frequency | Percent |
|----------------------|----------------|
| Never | 67.5 |
| Once a month | 11.0 |
| Twice a week or more | 8.4 |
| Twice a month | 6.3 |
| Once a week | 5.6 |
| Every day | 1.2 |

Table 54. Person rode with when riding with someone else (N=630)

| Person | Percent |
|-----------------|----------------|
| Spouse/partner | 49.5 |
| Friend | 34.9 |
| Son or daughter | 27.3 |
| Neighbor | 11.7 |
| Other relative | 8.3 |
| Someone else | 3.2 |
| Grandchild | 2.5 |

Table 55. Concerns when getting a ride with someone else (N=514)

| Concerns | No problem % | Small problem % | Large problem % | Mean* |
|--|--------------|-----------------|-----------------|-------|
| Don't like to feel dependent on others | 33.5 | 31.5 | 35.1 | 2.0 |
| Worry about imposing on others | 43.0 | 35.8 | 21.2 | 1.8 |
| Have to fit into another person's schedule | 45.3 | 36.9 | 17.8 | 1.7 |
| Feel embarrassed asking for a ride | 57.8 | 27.2 | 15.0 | 1.6 |
| Don't know many people willing to help | 54.5 | 28.0 | 17.5 | 1.6 |
| Feel obligated to reciprocate | 66.9 | 22.0 | 11.1 | 1.4 |
| Concern about person's driving ability | 70.2 | 24.2 | 5.6 | 1.4 |
| Other | 82.5 | 4.8 | 12.7 | 1.3 |

* Mean rating is average of 1 = no problem, 2 = small problem & 3 = large problem

Table 56. Difficult to continue to reside in current home if no longer able to drive (N=704)

| Difficult | Percent |
|-------------------|---------|
| Strongly disagree | 14.1 |
| Disagree | 30.0 |
| Agree | 36.1 |
| Strongly agree | 19.9 |

Perceptions of Transportation in the Community

There is a very high satisfaction rating among respondents regarding the ability to get around in their community with 47.4% being satisfied and 35.3% being very satisfied (Table 57). Respondents feel that the quality of transportation available in their community is fair to good, but their satisfaction with the quality of dependable public transportation and variety of transportation ranges mostly from very poor to fair (Table 58).

Table 57. Satisfaction with ability to get around in community (N=719)

| Satisfaction | Percent |
|-------------------|---------|
| Very dissatisfied | 7.4 |
| Dissatisfied | 9.9 |
| Satisfied | 47.4 |
| Very satisfied | 35.3 |

Table 58. Quality of transportation services in community (N=613)

| Description | Very Poor % | Poor % | Fair % | Good % | Very Good % | Mean |
|--|-------------|--------|--------|--------|-------------|------|
| Adequate parking provided for people with disabilities/health problems | 8.1 | 11.9 | 26.3 | 41.7 | 12.0 | 3.4 |
| Able to get to most places wishing to go | 15.7 | 12.9 | 22.5 | 31.6 | 17.3 | 3.2 |
| Convenient transportation for people with disabilities/health issues | 17.1 | 22.1 | 33.3 | 23.0 | 4.5 | 2.8 |
| Offering dependable public transportation | 23.4 | 25.6 | 29.4 | 17.7 | 4.0 | 2.5 |
| Variety of transportation services | 22.8 | 25.3 | 31.3 | 16.6 | 3.9 | 2.5 |

Respondents feel very strongly that driving conditions in their communities could be greatly improved if cell phone usage while driving was banned (72.6%) and road construction was completed more quickly (Table 59). They also noted better moving violation enforcement (48.9%) and better highway maintenance (49.3%) as desirable improvements.

Respondents were asked what types of difficulties with driving they have in their own communities. The majority of respondents feel that the biggest concerns, which are a small or large problem in their communities, are inconsiderate drivers, dealing with traffic congestion, that traffic is too hectic, and poor road conditions (Table 60). With respect to specific concerns of respondents, they tend to think that potholes are not repaired in a reasonable amount of time. They are split as to adequate lighting and readability of signs for night driving (Table 61). Also see Appendix A.

Table 59. If still driving, recommendations to improve driving conditions in community or area (N=671)

| Improvement | Percent |
|---|---------|
| Ban cell phone usage | 72.6 |
| Speed up road construction improvements | 62.0 |
| Better highway maintenance | 49.3 |
| Better enforcement of moving violations (tickets, etc.) | 48.9 |
| More reflectors/paint lines better | 41.9 |
| More lighting around signs | 31.3 |
| Larger lettering on signs | 29.8 |
| More driver education | 28.9 |
| More signs/add road signs where needed | 21.0 |
| Improve exit/entrance ramps | 17.4 |
| Reduced speed limit | 10.4 |
| Other | 9.1 |

Table 60. Driving difficulties in community (N=679)

| Difficulty | No problem % | Small problem % | Large problem % | Mean |
|---|-----------------------------|--------------------------------|--------------------------------|-------------|
| Inconsiderate drivers | 12.4 | 47.9 | 39.8 | 2.3 |
| Dealing with traffic congestion | 38.7 | 44.3 | 17.0 | 1.8 |
| Traffic too hectic | 35.7 | 48.8 | 15.5 | 1.8 |
| Poor road conditions | 33.5 | 52.1 | 14.4 | 1.8 |
| Cost of owning/operating a car is too much | 48.6 | 38.2 | 13.2 | 1.7 |
| Headlight glare from oncoming traffic | 43.3 | 45.4 | 11.3 | 1.7 |
| Driving at night | 52.2 | 35.1 | 12.7 | 1.6 |
| Parking | 61.7 | 29.3 | 9.0 | 1.5 |
| Fear of crime | 56.6 | 35.1 | 8.2 | 1.5 |
| Being able to see signals, signs, lane markings | 65.6 | 29.8 | 4.6 | 1.4 |
| Narrow lanes | 65.2 | 30.9 | 3.9 | 1.4 |
| Driving through construction zones | 63.7 | 31.5 | 4.9 | 1.4 |
| Poor weather conditions | 61.6 | 33.3 | 5.1 | 1.4 |
| Worried about getting lost | 85.8 | 11.2 | 3.1 | 1.2 |
| Entering/exiting the highway | 78.8 | 18.1 | 3.1 | 1.2 |
| Medical/health difficulties | 84.9 | 11.8 | 3.4 | 1.2 |
| Not trusting ability to drive | 90.2 | 8.3 | 1.5 | 1.1 |
| Feeling confident about driving | 92.8 | 5.4 | 1.8 | 1.1 |
| Difficulty handling car | 97.1 | 2.0 | 0.9 | 1.0 |

Table 61. Concerns about local traffic, roads and streets, and street signs in community (N=664)

| Concern | Strongly disagree % | Disagree % | Not Sure % | Agree % | Strongly agree % | Mean |
|---|----------------------------|-------------------|-------------------|----------------|-------------------------|-------------|
| Enough lanes to accommodate all traffic | 47.8 | 14.8 | .2 | 32.0 | 5.2 | 2.3 |
| Potholes repaired in a reasonable amount of time | 22.9 | 40.9 | 11.2 | 21.0 | 4.1 | 2.4 |
| Signs confusing | 8.0 | 56.8 | 14.6 | 18.7 | 1.9 | 2.5 |
| Signs are missing | 4.9 | 39.8 | 28.5 | 22.0 | 4.7 | 2.8 |
| Street signs are readable at night | 9.4 | 31.8 | 13.6 | 40.1 | 5.2 | 3.0 |
| Adequate lighting for night driving | 8.1 | 31.0 | 16.6 | 38.9 | 5.4 | 3.0 |
| Traffic moves too fast | 7.0 | 39.2 | 14.1 | 31.1 | 8.7 | 3.0 |
| Street signs provide advance warning about upcoming major intersections | 5.5 | 23.5 | 17.1 | 48.7 | 5.3 | 3.2 |
| Signs are in locations that allow enough response time | 3.6 | 25.0 | 12.1 | 55.5 | 3.9 | 3.3 |
| Signs are large enough to see from distance | 5.7 | 26.0 | 7.0 | 54.4 | 6.9 | 3.3 |
| Often traffic delays | 3.5 | 27.6 | 12.2 | 44.8 | 11.9 | 3.3 |
| Stop signs and traffic signals are easy to see | 2.6 | 18.0 | 7.9 | 65.5 | 6.0 | 3.5 |
| Bridges are well maintained | 2.6 | 9.9 | 24.6 | 57.1 | 5.7 | 3.5 |
| Lane marking are clear | 1.6 | 16.3 | 8.2 | 67.7 | 6.2 | 3.6 |
| Street signs are easy to understand | 1.5 | 13.5 | 7.2 | 69.9 | 7.8 | 3.7 |

Knowledge and Use of Public Transportation

A large number (40.3%) of respondents have no knowledge of public transportation available in their communities, which correlates with the high percentage that would have difficulty continuing to reside in their current home should they no longer be able to drive (Table 62). The majority of respondents (95.1%) reported no use of public transportation in the two months prior to this survey (Table 63).

The respondents of this survey reported many different problems with public transportation (Table 64). Some problems of the highest concern are accessibility (getting to the stop or station), that the public transportation does not go where they need to go, it takes too much time, and there is no adequate shelter from the weather while waiting. In general, the respondents feel that they do not have difficulty in boarding the

transportation that is available, that they are able to get a seat, that the vehicles are maintained adequately, and that the cost of public transportation is not too expensive. Also see Appendix A.

Table 62. Knowledge of public transportation available in community (not including taxis) (N=719)

| Transportation | Percent |
|-----------------------|----------------|
| Yes | 59.7 |
| No | 40.3 |

Table 63. Amount of personal public transportation usage in past two months (N=728)

| Frequency of usage | Percent |
|---------------------------|----------------|
| Every day | 0.3 |
| Twice a week or more | 0.8 |
| Once a week | 0.8 |
| Twice a month | 0.8 |
| Once a month | 2.2 |
| Never | 95.1 |

Table 64. If public transportation is available, the extent of problems associated with usage (N=561)

| Problem | No problem % | Small problem % | Large problem % | Mean |
|--|---------------------|------------------------|------------------------|-------------|
| Does not go where needed | 21.9 | 32.4 | 45.7 | 2.2 |
| Accessibility (getting to the stop or station) | 31.2 | 28.0 | 40.8 | 2.1 |
| Adequate shelter from the weather while waiting | 23.6 | 42.5 | 33.8 | 2.1 |
| Takes too much time | 23.4 | 39.7 | 36.9 | 2.1 |
| Transfers are difficult | 41.1 | 40.6 | 18.3 | 1.8 |
| Worried about crime | 55.3 | 31.8 | 12.9 | 1.6 |
| Getting information about fares, routes, and schedules | 54.2 | 35.1 | 10.8 | 1.6 |
| Other | 65.2 | 9.1 | 25.8 | 1.6 |
| Too expensive | 62.0 | 30.0 | 7.9 | 1.5 |
| Difficulty boarding | 72.8 | 18.3 | 8.9 | 1.4 |
| Vehicles are poorly maintained | 63.5 | 30.0 | 6.5 | 1.4 |
| Being able to get a seat | 78.4 | 16.1 | 5.4 | 1.3 |

Driving Experience

The majority of respondents who no longer drive have been drivers in the past (82.8%), with more than 50% of them having stopped driving within the last 4 years (Tables 65 and 66). Only 23.9% have moved to a new residence since they stopped driving but, of those, most (93.0%) cite transportation problems as their reason for moving (Tables 67 and 68).

Table 65. Respondent was a driver in the past (N=93)

| Driver in past | Percent |
|-----------------------|----------------|
| Yes | 82.8 |
| No | 17.2 |

Table 66. Number of years since stopped driving (N=62)

| Number of years | Percent |
|------------------------|----------------|
| less than one year | 12.9 |
| 1 | 16.1 |
| 2 | 16.1 |
| 3 | 6.5 |
| 4 | 11.3 |
| 5 | 8.1 |
| 6 | 1.6 |
| 7 | 4.8 |
| 8 | 3.2 |
| 10 | 8.1 |
| 12 | 1.6 |
| 19 | 1.6 |
| 20 | 4.8 |
| 21 | 1.6 |
| 46 | 1.6 |

Table 67. Moved to new residence since they stopped driving (N=67)

| Moved | Percent |
|--------------|----------------|
| Yes | 23.9 |
| No | 76.1 |

Table 68. Transportation problems influenced decision to move (N=357)

| Problems | Percent |
|-----------------|----------------|
| Yes | 93.0 |
| No | 7.0 |

Non-drivers noted that problems with transportation most heavily affect going to the doctor, shopping, and recreation and social activities; although more than 60% feel that transportation issues are never a problem with any of their trips (Table 69).

Respondents were asked about certain driving problems and how those problems affected their decision to stop driving. More than 50% of respondents feel inconsiderate drivers, night driving, headlight glare from oncoming traffic, that traffic was too hectic, and not trusting their ability to drive primarily contributed to their decision to stop driving.

Table 69. The extent that transportation problems interfere with specific trips (N=145)

| Type of trip | Never % | Sometimes % | Often % | Mean |
|--|---------|-------------|---------|------|
| Doctor | 60.0 | 29.0 | 11.0 | 1.5 |
| Visit friends | 63.0 | 22.0 | 15.0 | 1.5 |
| Grocery or drug store | 63.9 | 25.6 | 10.5 | 1.5 |
| Shopping for non-grocery items | 60.7 | 28.1 | 11.1 | 1.5 |
| Recreation activities (movies, sports) | 60.9 | 27.3 | 11.7 | 1.5 |
| Visit family | 70.1 | 17.3 | 12.6 | 1.4 |
| Place of worship | 71.2 | 17.8 | 11.0 | 1.4 |
| Social activities | 66.1 | 23.6 | 10.2 | 1.4 |
| Volunteer activities | 70.8 | 16.8 | 12.4 | 1.4 |
| Other | 76.7 | 10.0 | 13.3 | 1.4 |
| Work or school related | 81.4 | 6.9 | 11.8 | 1.3 |

Table 70. Effect the following problems had on the decision to stop driving (N=128)

| Problems | No problem % | Small Problem % | Large Problem % | Mean |
|---|-----------------------------|--------------------------------|--------------------------------|-------------|
| Inconsiderate drivers | 26.1 | 42.9 | 31.1 | 2.1 |
| Driving at night | 34.8 | 33.9 | 31.3 | 2.0 |
| Headlight glare from oncoming traffic | 35.7 | 40.0 | 24.3 | 1.9 |
| Traffic too hectic | 39.5 | 36.0 | 24.6 | 1.9 |
| Not trusting ability to drive | 46.3 | 28.9 | 24.8 | 1.8 |
| Dealing with traffic congestion | 50.0 | 26.7 | 23.3 | 1.7 |
| Poor road conditions | 41.2 | 43.9 | 14.9 | 1.7 |
| Feeling confident about driving | 55.6 | 19.7 | 24.8 | 1.7 |
| Poor weather conditions | 46.2 | 37.6 | 16.2 | 1.7 |
| Medical or health difficulties | 51.6 | 24.6 | 23.8 | 1.7 |
| Ability to see signals, signs and lane markings | 53.9 | 27.8 | 18.3 | 1.6 |
| Narrow lanes | 55.8 | 33.6 | 10.6 | 1.6 |
| Parking | 58.1 | 29.1 | 12.8 | 1.6 |
| Cost of owning/operating vehicle too much | 60.9 | 28.9 | 10.2 | 1.5 |
| Entering or exiting the highway | 60.9 | 24.3 | 14.8 | 1.5 |
| Driving through construction zones | 65.8 | 23.1 | 11.1 | 1.5 |
| Fear of crime | 56.5 | 33.9 | 9.6 | 1.5 |
| Worried about getting lost | 73.3 | 14.7 | 12.1 | 1.4 |
| Difficulty handling vehicle | 70.2 | 17.5 | 12.3 | 1.4 |

IV. CONCLUSIONS

A number of significant facts emerged from the research.

1. Data show that those seniors we surveyed at the senior centers are more at risk of being isolated and unable to access community services than the seniors we surveyed through the mailed survey.
 - Senior center attendees are slightly older (73 years vs. 70 years).
 - The educational level of center attendees is lower with 56.9% of them having less than a college degree compared to 26% of the general population.
 - 48% of the attendees live alone compared to 29% of all seniors, and 66% have an annual income of less than \$20,000 as compared to 16% of all seniors in the study.
 - 53% of senior center attendees rate their health as “fair” or “poor” compared to 24% of others in the study.
 - Of the seniors in the senior centers who participated in the study, 48% live alone compared to 30% in the mail survey sample.
 - A much higher percentage of senior center attendees do not drive and do not own a vehicle relative to the mail survey group.
 - A somewhat higher percentage of those at the senior centers have reduced driving in the past two years and a much larger percentage have stopped driving in the past two years than the general population of Pima County seniors..

Because of the lower socio-economic status of the senior center sample, there is evidence those who are not as well off economically and those who are older are likely to experience greater transportation related problems than seniors with more resources. This finding is consistent with the research reviewed in Section II.

2. Seniors are responsible for most of their own transportation needs.
 - Seniors make an average of 8.87 trips a week, or an average of one a day. For almost 90% of those trips seniors report driving themselves.
 - Less than 5% of seniors interviewed use any type of public or senior/disabled transportation services.
3. At the same time, seniors’ driving habits are changing.
 - 53% of senior center attendees and 42% of mail survey respondents report driving less in the past 2 years.

Though self-reliance is likely desirable, older seniors will need transportation alternatives as they reduce and, ultimately, stop driving.

4. Seniors need more transportation options to stay active and involved. The vast majority of the “trips” they make on a daily/weekly basis are for social events, to do “errands,” or go to church. Several of the study’s findings suggest their ability to continue to be active and to maintain a fulfilling lifestyle is harmed by lack of transportation.
 - Seniors who are “mobility impaired” feel that public transportation is not usable because of their special needs, or long waits, or they live in areas where these services are not available.
 - 31 % of diary respondents and 27% of mail survey respondents cited less participation in leisure activities in the past two years.
 - 56% feel that it would be difficult to remain in their current home if they are no longer able to drive.
 - 24% have moved into a new residence since they stopped driving.

Research demonstrates that active and involved seniors are more likely to retain their physical and mental health. Thus, transportation alternatives are needed to help them maintain involvement for their personal, as well as societal, well-being.

5. While 71% of the mail survey respondents would prefer a friend or family member to drive when they cannot, the 48% of seniors who live alone and the 29% with limited family and social networks, may have limited options. This could disproportionately affect those who have relocated to the area upon retirement.
6. Forty percent of respondents have no knowledge of public transportation services available in their communities. Those who do know about it rarely use it primarily because they feel it does not go where needed, is not accessible, there is inadequate shelter from the weather while waiting, and it takes too much time.

The lack of knowledge and use of public transportation is a concern as this is clearly an option for seniors who are no longer able to drive but are still mobile enough to do some walking.

7. Seniors feel that improving the quality of transportation services in the community will involve more dependable transportation (49%) and having a variety of options for transportation services (48%).

V. RECOMMENDATIONS

1. While seniors who are currently using senior centers are actively involved, the fact that they have more risk factors will require that programs and services be more proactive in keeping them engaged in the community. Planners will likely need to work with health care and in-home service providers as well as community-based service providers.
2. While the vast majority of seniors are still driving, other resources will be required as more and more of them are unable to operate a motor vehicle safely. And since the majority of seniors do not currently know of, and/or use public transportation, a significant effort will need to be put into outreach and public education regarding transportation alternatives when driving is no longer an option.
3. Since many seniors are voluntarily cutting back on their driving, community organizations, businesses, and churches should be encouraged to support alternative transportation options to keep seniors involved.
4. More housing options for seniors need to be developed that are near medical and shopping services so that seniors have greater access.

APPENDIX A: OPEN ENDED RESPONSES

Comments about driving behavior changes:

- Don't drive at night as much as I used to. Don't drive as many miles in a day as I used to.
- I drive more, time and distance.
- I have not changed my driving habits.
- I let my companion drive more when going to the same place.
- I only go 2 or 3 miles in home area.
- I periodically read the drivers handbook to know the laws.
- I try to make only right turns.
- Nothing changed.

Alternatives to driving:

- Bicycle
- Change residence to one closer to where I need to go.
- Hire a driver.
- Pay someone to drive.
- We need more info & better public transportation

Public transportation comments:

- I live about 7 miles from any public transportation.
- No public transportation in our area.

Other forms of transportation

- A co-worker (4)
- Parents - ages 87 and 85.
- Some locals will take you sometimes for gas & for \$50 to the city for doctors.
- Someone else: taxi or shuttle

Riding with others:

- Anyone expects you to pay for gas and sodas and food and \$50 too. Too expensive.
- Friends share rides when we go out. Don't depend on any one.
- I have no vehicle at the moment
- It would hurt her feelings if I declined her carpool once a month to our club meeting
- Never need to ask.
- This isn't a current issue
- We always ride with spouse/partner
- We trade off, take turns

Suggestions for transportation improvements:

- 1. Many drivers seem ignorant of the "rules of the road". How about a "rule of the day" in the local newspaper? 2. Enforce speed limits. Autos that pass me at 20-50 percent over the limits often plug the next intersection when I reach it as the light turns green. It will reduce congestion!
- A light rail system between Tucson and Phoenix.
- Advance signs warning of double right turn lanes.
- Better maintenance of neighborhood streets.
- Better screening of 65+ drivers
- Bus pullouts and right turn lanes
- Bus ramps for stops to let cars by.
- Carpool lanes in Seattle are enforced 6 a.m. to 9 p.m. Other drivers encouraged to call & report cheaters.
- Clear trees and brush around signs
- Connect Syder Road
- Crack down on aggressive drivers.
- Cross town freeway.

- Do not close all highway exits!!!!
- East/west and north/south freeways.
- Enforce laws. Also, drivers use or stay in left lane. Bicycle lane below the posted limit.
- Enforce penalties for running lights at intersections.
- Enforce speed limits!
- Enforce turns on green arrows only.
- Get rid of bullshit circles in intersections.
- I don't like reflector bumps. Good paint - yes. Other states don't use reflector bumps
- Keeping tire debris off highway.
- Larger street signs!
- Left on arrow only at First and River Rd.
- Limit entrance ramps in downtown area.
- Limit growth.
- Long wait at RR crossing
- Make lights consistent, e.g. leading green arrow.
- Make road construction crews move signs when not applicable. Example: "R/H. lane closed ahead" at 9:00 in the morning: true. Since I pay attention to these signs, having seen the need to move to the next lane, I do. Now is 2:00 in the afternoon, the sign still there I again move over, but R/H lane no longer blocked do to others who pay no attention to signs, I can't make a right turn where I need to. I feel I want to strangle some one.
- Make signs easier to understand & give more advanced notice for necessary lane changes
- Mandatory driver's test for the elderly.
- More aviation type roads.
- More left turn lights.
- More public transportation.
- More right turn lanes @ intersections.
- Need a cross town freeway.
- Need some cross town freeways.
- No passing zones & speed humps.
- Prohibit U-turns at ALL major intersections that have traffic signals.
- Red light runners. People drive faster in town then on I-10.
- Road signs (sheet) placed on dividers before street, i.e. Roller Coaster Rd. placement.
- Ticket slow drivers as well as speeders.
- Too many fatalities from excess speed! Needs reduced.
- Trim shrub/plants back at corners to view oncoming traffic better
- Turn stoplights to flashing red during night hours (6 pm to 7 am).

Community transportation problems:

- After construction street signs take too long to replace.
- Have a sign indicating the next main cross street placed one block before the intersection to allow cars to get into the correct lane to make a turn.
- Houghton in Tucson should have been planned for a four lane divided highway and the right of way established long ago. Stupid lack of planning and foresight at A.D.O.T. Complicated over kill at some bridges, as at Duval on I-19.
- In general, Tucson roads were built for a less populated community.
- Interstate 10 should be diverted north-west of Tucson toward San Manuel, down the San Pedro Valley and hook up to existing I-10.
- There are many speeders (excessive) on the road.
- Traffic moves too fast. I agreed with this but not because speed limits are too high, they're not.
- Tucson planning has allowed much too much outlying development without considering impact of increased traffic. However, increasing traffic lanes just seems to encourage more development. Look at Phoenix for a terrible example.

- Turn signals should all be same - not some leading left turn, etc. It confuses all drivers. Crosswalk lights should all operate the same, i.e. all stop on red - not have flashing lights.

Public transportation issues:

- Bus doesn't run on Romero anymore
- Not on time and take a very long time

Public transportation use:

- Don't have any info. on public transp. It would be very helpful to have info that CLEARLY AND SIMPLY explains availability, cost, schedules & #'s of such services
- I only use it to return home from jury duty.

Other public transportation concerns:

- Availability.
- Have never used any public transportation.
- Haven't had a need. Don't know the answers. I would call my son.
- I do not have buses close to my house.
- I'm asthmatic so doubt that I could breathe well on a bus.
- I'm near 90 and very ill and cannot go anywhere without personal care and help.
- My home in Ajo is 100 miles from Casa Grande, 120 from Phoenix & 130 from Tucson. Every month I have to see a Dr. in one of these places.
- No buses run by us. Nearest is about 5 miles away.
- Not enough north/south routes.
- Summer heat deters me from walking to and waiting at bus stop.
- The nearest bus stop is 2 miles away. I live outside city limits.
- Times of day that I would need transportation.
- Unreliable - took bus 3 times to work. Was late each time.

Other comments:

- 1. Cameras at major traffic intersections please. 2. Enforce carpool lanes. 3. Increase carpool lane 55 mph mandatory speed limit. 5. More separate bike lanes. 6. Complete bike/walk paths along Santa Cruz River.
- 1. Generally speaking, the whole country needs better driver's education. Not just Tucson, or the state of Arizona. 2. We need better drivers license testing. Who gives a hoot if you can parallel park? It should be can you enter and exit I-10 properly! When pulling on to I-10 and you slow down on the on ramp instead of picking up speed to match the traffic you are merging with, you are stupid and dangerous. 3. All the idiots who can't call their friends before leaving home or work and just have to use a cell phone are dangerous.
- 1. Improved public transportation with a variety of alternatives allowing access to more locations throughout the Tucson area should be a priority. 2. Road repair and maintenance are severely lacking in Tucson.
- 1. Need more left turn arrows. 2. Left turn at beginning of green light. 3. Advance warning street sign of all major intersections (city and county). 4. New street sign put up after major construction (River & Dodge missing).
- 1. Sun Tran bus, no service on River Rd. to Oracle Rd. Need the #15 buses to run Stone to River and east on River Rd. to Campbell Ave. and then south to UA Mall. 2. Weekend service from east side to west side. Also, last bus home is at 6:45 p.m.
- A birth certificate is no true indicator of a person's age. Most people guess me to be 55 or 60 - because of my attitude about life. Use it or lose it just about covers everything, including mind and body. Street conditions on the NW side are terrible, especially between Miracle Mile and Wetmore Road, between Oracle & Romero Rd causing more trips to the front end alignment.
- A light rail system between Tucson and Phoenix would be great. HG 86 needs to be widened with all the building west of Tucson, including the Tohono O'odham Reservation.

- After 60 years of driving the U.S, I received my first ticket, failure to yield, because a biker ran into my rear bumper. I went to driving school. What a joke. The young instructor was very humorous and witty, but taught me nothing about safe driving. Nothing about the psychology or dangers of today's fast moving society. I'm 78 years old. I hate to waste 5 hours of my life listening to drivel.
- Ajo Transportation, owned by Kathy Boyd, is doing the best job they can to keep Ajo citizens mobile in Ajo and Why. They also have regular trips to Phoenix & Tucson (but none to Casa Grande). This allows people to get to their Dr. and to do some big city shopping. The main problem making it difficult to us their services for more general purposes is connecting with other transportation systems so that one can get to the airport, at the zoo or visit friends and/or relatives. A brochure, web site,, telephone consultant or some other educational device is needed to help people move about from the need of the line in Phoenix and Tucson.
- Any person caught driving while using a cell phone should get 10 years in a foreign prison.
- As I do not need to use public transportation yet, it is difficult to judge ease of using. I don't have bus schedules nor a need to keep them handy. I do know there is a bus stop about a quarter of a mile or less from my house, but do not know routes.
- At license renewal time, we are not even asked if we would like a driver's handbook. What kind of "education" is that? How about a periodic public service announcement series on local radio by the DPS - Highway patrol (or equiv.) on tail gating, safety belts, stopping distances, highway object avoidance maneuvers, moving left for emergency vehicles on side of road, rear view mirror setting for best vision, when passing do not return to lane until you see both head lamps in overhead mirror, stop behind limit line at intersections because that person on your right, turning right, needs to see to your left. In short, help people to be more courteous! It will reduce road rage.
- Bus stop on Kolb Speedway (southwest corner) needs a screen for protection. Cooler would be better.
- City streets in Tucson need to be improved (bumps, road noise, holes, broken out pavement). High traffic roads, such as Sabino Canyon, where speeds are excessive and noise levels in the neighborhoods are high. Motorists' autos with one tail light out is a common occurrence. I see at least two on each trip locally to store, post office, etc. Intersection at Tanque Verde and Sabino Canyon road, need larger sign for no 180 degree turn for cars going east on Tanque Verde.
- Closing a freeway for 3 years to add one lane in each direction. Who planned this? The 3 Stooges?
- Elderly driving in Green Valley is a hazard. Mandatory driver's tests for those over 55 is warranted.
- For the elderly and the disabled, information access for transportation needs to be kept simple.
- Houghton Road widening should be expedited. At times it takes much time to exit our housing development. A right turn is difficult and a left turn nearly impossible.
- I am temporarily using a disability parking permit due to an injury. There is no place for me to park close to my place of employment downtown. There is one handicapped parking special permit space near, but it has been assigned to someone. I called city transportation to no avail. It's a BIG problem for me getting into my work place on crutches. I work at Broadway and Scott.
- I applied to Van Tran - Tucson city disability transportation. I DID NOT QUALIFY. I have had and have: 13 brain tumors, pacemaker, thyroid disease, herniated disc, stenosis. I am unable to walk very far. I live in constant pain. In order to qualify they wanted me to go to their physical therapists. WHY? What would they know of my diseases. I am also partially blind. I need say no more!
- I can't understand why Tucson hesitates on street cameras. We see red light runners several times a day. We live directly north of Fry's in Crossroads Festival. Their northern most exit is for semi trucks only. Drivers of passenger cars use it all the time. It is so dangerous when we attempt to enter our complex.

- I didn't mind filling this out, however, these questions did not apply to me for I drive all the time. That's part of my income. I find driving to be relaxing.
- I do not drive. Do not own a car. Need busses to malls and stores.
- I feel there should be officers of the law on the road patrolling the flow of traffic and stop the use of cell phones on the road. I drive defensively for my safety, but I have had numerous incidents when someone on a cell phone in the car almost hit me. If police officers cannot patrol, there should be helicopters in the air to monitor potential dangerous drivers and situations. A course of Drivers Education in high school for teens and defensive driving would be a great asset for young and elderly drivers alike. I had a defensive driving course by my police dept. in NJ while a volunteer on the ambulance as an EMT. I use this training daily.
- I have a sister who is disabled and low income. She has been denied transportation by Van Tran because of income level. Her income is barely enough to meet her basic needs. It would seem that disability should play a more important role than income.
- I have looked into bus service, though I don't need to catch a bus. Nearest bus stop is 2 miles away. Routes are inconvenient to get to nearby stores, downtown & to where I work (near airport). If I had to rely on buses I would have a serious problem! Some roads also do not go through very safe areas.
- I have no knowledge of public transportation in my area. Busses would not be an option for the elderly or infirm in many areas of suburban Tucson because of extreme heat, lack of sidewalks, shelter, etc. Any realistic public transport would have to be on a pick-up basis.
- I hope this survey helps create concrete solutions and better transportation in Pima County. I think we need to think about putting mass transit in place sooner than later like an EL or a Metro system.
- I live in Green Valley where most people travel by their private cars. There is a large number of elderly drivers who have a difficult transportation problem.
- I resent closing the freeway ramps for 3 years!! It should be done in stages. Dummies.
- I sometimes think about these problems: car jacking, inconsiderate drivers (we have a lot of them), road rage. We need more police officers on our streets day and night.
- I think I may be the exception to the rule - 85 year old people should be "with one foot in the grave", but I am extremely healthy and very self sufficient.
- I think it would be useful to include refresher information on driving and safety tips - being alert, no phones, pay attention to driving.
- I understand the importance of this survey, but since you are sending it out to people under 70, I recommend your group attend some sensitivity training and additional education concerning senior citizens. The majority of today's seniors are very active and resent questions like this survey. My wife and I play tennis 3 times a week and travel frequently. However, I tried to answer so the survey will provide information that helps. When we can't drive, we will have to move because public transportation is not available.
- I was born and raised in L.A. I witnessed the growth of traffic and construction of freeways. As you can see, the condition of roads and construction of freeways did not help much. Reason: the focus is on moving CARS, not PEOPLE. Pima County is clearly heading in that same direction. Innovative thinkers must focus on moving PEOPLE not CARS. The idea of a light rail system must be considered in the thought process. Like it or not, traffic growth is upon us. San Francisco built the Bart System to move people into and out of the city. I suggest Pima County take a good hard look at it.
- I would like to get to downtown Tucson for museums, convention center, etc., but I don't drive because of the traffic, one-way streets and lack of parking. It would be nice to have a van or a bus that ran every hour. There could be a fare which would make the service profitable.
- I would love to see public transportation so good and pollution free that we could virtually ban private care use in Tucson. I think building more roads and widening streets is a band aide solution that won't resolve the traffic problem.
- I would rather you call me @ 520-387-7823. It is easier for me to speak as opposed to writing. I am aware of small things that make a big difference if something could be done to improve it.

- I-10 is the only major artery between Tucson and Phoenix and is very heavy with truck traffic; something needs to be done about this. Tucson needs some crosstown freeway, traffic has increased by leaps and bounds in the past few years and need some crosstown freeways.
- If law enforcement would enforce laws regarding "inattentive" drivers, i.e. eating, primping, text messaging, telephones, etc., the traffic would be much safer. Also drivers, including 18 wheelers, who travel in the left lane and do not move over are an absolute disaster on I-10. Cops are the biggest problems on I-10. They are arrogant, rude and jerks.
- If the speeders and red light and stop sign blowers were ticketed, especially the speeders, Tucson could pave it's streets in gold.
- Important question not asked: How much do you drive (in miles) annually.
- In general I find driving here a pleasure, but some road signs are not clear and I can see how senior drivers may become confused and turn incorrectly, thus becoming lost.
- In my younger years, we were in the trucking business in the northern states. I have driven trucks and I consider myself better than average driver and especially for my age. Divorced at age 38, I have driven many, many miles by myself and no accidents or tickets.
- In regard to #30 question, it is not a problem as yet, but my first consideration is "not trusting my ability to drive". I will stop driving then.
- Issues involving construction of new homes are causing huge traffic problems in the unincorporated parts of Tucson. Contractors should be required to widen roads and place traffic signals around new housing complexes
- It is totally outrageous the length of time construction takes in Tucson. Most of those road crews take more breaks than work. Cortaro and I-10 - and just Cortaro is a good example. They have screwed with that road since I moved here in 2001 and it just got finished. Freeway on and exits on 6/15/07 to be closed for 3 years. Who are you people kidding? They won't be done for 5 years. I for one plan to get out of Arizona next year and I'll never come back. Tucson is where Phoenix was in 1986 when we left Arizona that time. They won't stop growth here. I want no part of it. Someone needs to ask where Arizona will find water in 20 years. There will be none.
- It might be a good idea not to do repairs of roads in the same area running the same ways. Late spring for example - repair on Sunrise going both ways from Pantano to Campbell and also decide to finish to final black top on River Road. There are more examples of this happening around the city.
- It seems that ADOT & city & county do not work together on many matters. Law enforcement in city and county does not enforce laws pertaining to big rigs on city streets, and the trucks with large tires up high for tire flaps & headlights. It has cost my family 5 windshields & these fools texting while they drive.
- Just to let you know that I resented the fact that you consider me old at 59. I would feel old hopefully later in life and when I know I'm starting to have driving problems. Have been in Arizona seven years now and have no problems driving - matter of fact have had no ticket in 34 years and health/vision reaction time is still good. License doesn't expire until 2013, so send me another form when the state considers me old and need yearly renewals.
- Lack of pull out lanes for buses on newly constructed road.
- Mandatory insurance creates unacceptable burden on working poor. If state dictates this obligation, then the state needs to make available a set yearly fee (minimum) within the reach of the worker that has to drive to work to be a productive citizen in our society. Public transportation is inadequate to meet this need. We do not need a class system in Arizona where the rich drive and the poor walk.
- Most of our driving is on a Harley. Enforcing the current traffic laws would be nice.
- My eyes are not too bad, but larger street name signs would really help me. I compensate by using a map or getting a computer map before I depart.
- My main concern while driving in our area is the number of people using cell phones & the red light racers. In the 2 years since we permanently retired to the area, we have come close to being hit no less than six times by folks trying to beat red lights or pre-occupied with phone use.

- My wife is 80 years old and I have a Downs syndrome daughter who depends on us for transportation.
- Need a cross town freeway in Tucson. Tucson Foothills does not get its fair share of motor fuel tax revenues since it is an unincorporated area. I like the idea of a truck route that bypasses Phoenix and Tucson. Need a law to keep trucks in the right lane on highways.
- Need more public transportation into neighborhoods where old folks don't have to walk so far with groceries or shopping. I'm a walker, but not when I'm loaded down with groceries.
- Never put chip seal on any road. Loose, flying gravel is dangerous. Could easily destroy an eye when walking my dog along a road. It did ruin my Ford Bronco windshield. Road projects take forever, many very poorly designed with poor quality that soon needs repairs. The concept of drainage seems beyond the mentality of road builders here. Much waste and inefficiency. In Green Valley, completing the E. Frontage road south of Continental was planned in the 1970's and hasn't happened yet. An interchange is badly needed on the 4+ mile distance between Continental and Canoa. On I-19 on the Indian Reservation there is a full interchange that is useless - no roads there. We need engineers with brains that know how to build a decent road, quickly and do it right. Closing the exits on I-10 in downtown Tucson for 3 years is simply intolerable.
- No buses in my area. Would need more van type transportation.
- On major streets you should place a sign indicating the next major intersection/cross street name so a driver has time to get into the proper lane to make a turn. Not everyone knows the city like a cab driver. This would improve the traffic flow at busy intersections.
- People over 65 need to be retested more often. Example: 65-70 written and driving - every 2 years, 70 and up - written and driving annually. There should be some kind of reflex test (reaction time), more frequent and tougher eye tests. THERE ARE OLDER PEOPLE OUT THERE WHO SHOULD NOT BE DRIVING.
- Please get the people in Arizona to use their signal lights!!
- Plentiful, flexible, public transportation available at most hours would greatly improve quality of life in general in Tucson and give me more confidence about my independence as I become older.
- Questions unanswered do not apply to me. Also, I have never used the bus or other public transportation, so some answers are speculative. I did not answer question 40, as I could not see its relevancy.
- Red light runners are a big problem! Northwest side is growing faster than the roads can handle.
- Set up mechanism to allow people who are forced to stop driving to identify themselves and their transportation need for planning on how best to support their needs. Stop those who misuse emergency services for routine transportation needs just because it's free. Provide emergency transportation and require them to use appropriate services when needed. Support local churches in providing bus transportation for members who do not have transportation to and/or from church.
- Should do check points occasionally for drivers license and insurance eligibility.
- Since there are no freeways (to speak of) to get around Tucson, all major N/S or E/W thoroughfares need to be 3 lanes each direction, minimum, with adequate left and right turn lanes. All lights should monitor to detect traffic flow or lack thereof.
- Stop red light runners, larger lettering on local street signs.
- Street lighting in Tucson is not great, but probably as good as can be, while allowing reasonable dark sky for nearby observatories. Road signage is generally good. My only complaint is that some street name signs are either poorly sited or poorly lit, making them difficult to see far enough away. It seems that unrestrained development will result in a race to see which will make Tucson unlivable first: run out of water or run out of infrastructure, particularly roads. For goodness sake, speed up road improvement projects. Not more projects, just finish them faster.
- Street signs should be larger and/or farther from the intersection, providing more reaction time.

- Take a lesson from: Washington, Oregon, California, Ohio, Indiana and others and stop incompetent contractors from taking two or more years to complete a road improvement that would take six months or less to complete.
- The city and country are lax in enforcing traffic laws. What can we expect when the LEO's don't observe the laws themselves. It is a rare day when you see patrol cars observing the speed limit and red lights. I wonder how many people are injured each year just because the traffic laws are not enforced?
- The lighting is non-existent on the east side of Town Pass Kolh. Speedway needs widening past "Como Seco"?. Except for some pot holes, Tucson is pretty good.
- The road construction is ridiculous! Roads are down to one lane and there are no workers to be seen... All this will keep visitors from coming to Tucson-meaning everyone will lose money, except for the construction companies involved.
- There is a need for more street lights and sidewalks. In some places without sidewalks and without lighting, pedestrians are very much at risk at night.
- There is no public transportation where I live. Roads are in TERRIBLE shape - pot holes are NEVER filled. After one storm, a road was torn up, and when the transportation dept. fixed it the road was even worse. They should have been made to come back and do the job correctly. Over all - the transportation system for the East side and south east side of Tucson is HORRIBLE. Not even available for most people. For now, we can drive our cars, but the day may come when we'll have to sell our houses and move to a Senior Home just because of lack of transportation and other services. Living here (zip 85641) is not for the faint of heart.
- This study is aimed at persons living within the city of Tucson. I live in the Catalina Foothills and taxis would be about the only alternative to driving myself. That would be cost prohibitive so I would probably have to relocate if I could no longer drive and my wife could no longer drive.
- This survey looks like a disguised justification to spend more tax-payer money on public transportation. Please count my votes!
- Ticket and pull drivers off the highway who are going way too slow.
- Too many wild drivers. Too many drivers using cell phones!
- Traffic lights in and around Tucson are confusing. Some have a leading green arrow, some do not. Some have the left turn arrow come on, even when there are no cars present waiting to turn. Others turn immediately red when there are no cars waiting. I've even seen some lights that have a short delay (5 seconds or so) before the green left turn arrow comes on. This last one is aggravating because cars hesitate because they aren't sure if the arrow will come on. Can you just make the lights consistent?
- Travel mainly by Van Tran
- Try to get more police men and women in the force to cut down on the speeders. They are all over worked and under paid now, but with speeding tickets they could get more help and better pay.
- Tucson has had major traffic problems for many years. We do not have enough parkways to reduce the traffic on major arteries, i.e. Speedway, Broadway, 22nd Street. We need major improvements to accommodate the growth of the city and the number of cars using our city streets. The last bond election which finally passed may be solution though definitely much delayed.
- Tucson needs a monorail system with all the large medians E & W. An above ground would cost less and make more sense; with an E. W. and N. S. system more people could be moved faster. Look at Disneyland. It was built in 1958 and still running strong.
- Tucson still needs freeways. Most problems are: cell phone users, red light runners, stop and go - no freeways, not enough lanes for amount of traffic, roads in bad shape, rude, rude drivers!
- We are very concerned about the safety of our roads and streets. It appears traffic has little or no regulation perhaps because of the lack of law enforcement of our police - that are too few for the number of vehicles on our streets and roads.

- We just moved here in Dec. 05. We love the area but I have never seen so many rude and inconsiderate drivers. I truly believe that most do not understand traffic laws - especially when making left turns.
- We live near I-19, there have been a few accidents that have ended on frontage roads or near homes. Think that better fences, guard rails or some other protection maybe needed along some of the housing areas.
- We need a bus at least a couple of times a day in my neighborhood. My wife works so I have no way to my Dr. or the stores. I am blind, but I can still take the bus.
- We need small size buses running north and south (not the regular ones), then regular size buses running east and west.
- We really do need reliable, convenient and relatively rapid public transportation in Tucson. Let's get ahead of the rest of the southwest in that one.
- Weekend Rocky Point traffic is bad - tailgating, passing on right side, passing at intersections, speeding.
- When I'm in town, can't wait to leave because of the traffic, lights and roads.
- Why is it, the State of AZ has to wait so many years before they decide to do something. It is like other issues in any state. You wait so long & there is no fixing the problem.
- Wish public transportation was quick and convenient so I didn't have to drive so often.
- Would use bus if it came down Houghton. Nothing even close to go to mall, grocery store, etc.

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