

## DETROIT AREA STUDY, 2001: Travel and Transportation

*By Robert W. Marans, University of Michigan*

### Summary

This report reviews transportation related issues in southeast Michigan, as examined in the 2001 Detroit Area Study (DAS). Some of the key findings from this survey of over 4,300 adults in the southeast Michigan region are as follows:

- Residents across the region are heavily reliant on their automobiles for travel, with very limited, and generally declining, use of public transit (i.e., buses). The highest use of public transit options are in Detroit and Washtenaw County.
- Among those who do use public transit, levels of use are strongly associated with distance to the nearest bus stop: the closer the bus stop, the more frequent is the use of public transit.
- Although average commuting times in the region are lower than in places like Chicago and Los Angeles, a significant amount of commuter stress is still reported in southeast Michigan. Levels of stress are strongly related to both the amount of time spent commuting, and to the commuter's location: the longer the commute, the higher the stress, though this relationship is strongest for Detroit and Wayne County residents, and is weakest for those in St. Clair and Monroe Counties.
- Most people believe that safe and reliable public transit is important to the quality of life of metro area residents. However, support for public transit improvements is tempered by the questions of tax increases and paying for improvements.
- Compared to the limited support for public transit improvements, there is wider and stronger support to pay for improvements to roads and highways.
- Transportation patterns, values, and priorities vary significantly across the region, by county and by type of community.

These and other findings are discussed in more detail on the following pages.



## OVERVIEW

This report is one of a series from the Detroit Area Study (DAS) on the Quality of Community Life conducted by the University of Michigan in 2001. DAS 2001 is a survey of over 4,300 adults in metro Detroit. The study addresses their perceptions, expectations, satisfactions, and behaviors associated with community living. Throughout this report, metro Detroit is defined as the seven counties in the southeast Michigan region: Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne. The city of Detroit is part of Wayne County. The series of reports cover topics including: attitudes about the region and Detroit; characteristics of respondents; public services, taxes, and local government; community and community involvement; neighborhood and neighboring; housing; moving intentions; parks and recreation; regional growth, development and the environment; and prospects for the future of the region. These and other reports are available online at <http://www.tcaup.umich.edu/workfolio/DAS2001/index.html>. Although the reports are based on data collected several years ago, they identify important differences across the region and provide a valuable basis for tracking changes into the future.

Findings in the current report cover resident travel patterns, including shopping and work trips; use and ratings of public transit; travel within the region; and the extent to which people are willing to tax themselves in order to address transportation problems.

## METHODOLOGY

Conducted in the spring and summer of 2001, the survey consisted of two parts. Initially, face-to-face interviews were conducted with

a probability sample of 315 adult respondents (18 years of age and older) living in the tri-county area of Wayne, Oakland, and Macomb Counties. Subsequently, a questionnaire was mailed to a sample of adults throughout the seven counties; 4,077 were returned. Response rates were 59.8 percent for the face-to-face sample and 56.7 percent for the mail sample. A summary of respondent characteristics is available on the study website above.

As part of the mail survey, respondents had the opportunity to write “additional thoughts” about the quality of life in their community or in the Detroit region.

In addition to survey responses, DAS 2001 compiled contextual information about the minor civil divisions (MCDs) or communities and environments associated with each respondent. Contextual information includes housing and demographic characteristics, land use characteristics, growth rates, employment, school information, and other characteristics of the communities where respondents live.

Findings presented in this and other reports show responses from the entire metro Detroit area and then from each of the seven counties. Because of its importance to the region and the number of respondents from Detroit, findings for the city are presented separately while findings for other parts of Wayne County are reported as Wayne-Other. In several instances, findings are shown for respondents living in different types of places such as the urban core (Detroit), its older suburbs (e.g., Royal Oak, Dearborn, Warren), newer suburbs (e.g., Farmington Hills, Livonia, Sterling Heights), large cities that are not contiguous to Detroit (e.g., Ann Arbor, Pontiac), mid-sized cities (e.g., Port Huron, Monroe, Ypsilanti, Mt. Clemens), small cities and villages (e.g., Brighton, Northville, Chelsea), and rural areas of the region.

### About the Author

Robert W. Marans is Professor Emeritus of Architecture and Urban Planning, and Senior Research Scientist, Institute for Social Research, at the University of Michigan. Professor Marans, who is trained as a planner and an architect, has compiled an extensive body of research, backed up with equally extensive community involvement, on issues of the built and natural environments, neighborhood quality, recreation behavior and parks, and retirement housing.

## FINDINGS

### SHOPPING TRIPS

Metro area residents are heavily reliant on their automobiles for shopping trips, with Detroit residents somewhat less so. When asked how they **typically** travel to their regular grocery store, 97 percent of the wider metro area respondents – compared to 89 percent of Detroiters – say they drive. And compared with the 25 percent of Detroiters who say they had walked to a grocery store “during the past week,” only 14 percent of all respondents say they had done the same. As for other (non-grocery) store trips, 32 percent of Detroiters say they had walked to other stores during the past week compared to between 9 and 26 percent of respondents from the remaining metro area counties (see Table 1). Least likely to walk are Livingston and Monroe County respondents.

Comparing community types, people in small towns (38 percent) report more walking

Table 1. Shopping Trips, by County

Walking Destination	Metro Detroit	Livingston	Macomb	Monroe	Oakland	St. Clair	Washtenaw	Wayne-Other	Detroit
Grocery store	14	4	11	4	12	12	13	15	25
Other stores	23	9	19	12	20	19	18	26	32

The question was: “During the past week, have you walked from your residence to (a grocery store/any stores other than a grocery store)?”

Figures represent the percentage of respondents who reported walking.



Table 2. Stress of Work/School Trip, by County

Reported Stress	Metro Detroit	Livingston	Macomb	Monroe	Oakland	St. Clair	Washtenaw	Wayne-Other	Detroit
Always stressful	6	5	7	5	6	4	5	6	5
Sometimes stressful	57	59	60	55	61	45	48	55	55
Never stressful	37	36	33	40	33	51	47	39	40
Total	100	100	100	100	100	100	100	100	100

The question was: “Is your drive to and from (work/school) always stressful, sometimes stressful, or never stressful?”

Figures represent the percentage of respondents reporting regularly stressful or unstressful commuting trips.

for shopping trips than those living in other types of communities. Least likely to walk are residents in the newer suburbs (13 percent) and in rural areas of the region (4 percent).

The amount of walking people report is associated with their views about the convenience of walking in their neighborhoods. When asked if they agree or disagree with the statement, “My neighborhood is conveniently located for people to walk to stores, parks, etc.,” about 6 in 10 from small cities and villages, the large and mid-size cities, and the older suburbs agree. In comparison, about 5 in 10 Detroit respondents feel it is convenient to walk, but only 3 in 10 from the newer suburbs and 1 in 10 from the rural areas feel this way.

Of course, people’s perceptions do not always correspond to their actions. Whereas nearly half (46 percent) of the metro area respondents think they live in a place where it is convenient to walk to stores in their neighborhoods, just one-quarter report such trips in the previous week.

### JOURNEY TO WORK OR SCHOOL

For respondents traveling to work or school, the automobile is their primary mode of travel. Most (93 percent) say they typically drive alone and only 2 percent car pool to work or school. The remainder walk, travel by bus, or use other means. Fewer Detroit respondents (83%) report driving alone.

### COMMUTE TIME

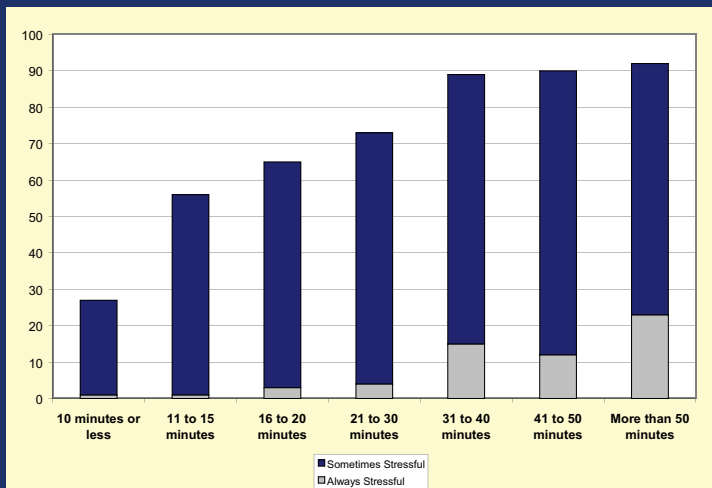
Most metro Detroiters spend less time commuting than do residents of other major cities. For metro Detroit respondents, one-way trips to work or school average 24.4 minutes (slightly lower than the 2000 U.S. Census figure for metro Detroiters of 26.5 minutes). In contrast, residents in the metro areas of Chicago (31.7 minutes) and Los Angeles (29.2 minutes) spend more time commuting to work. Trips in metro Detroit range from a few minutes to two hours. Those with the longest commutes are Livingston County respondents (30.4 minutes on average) while Washtenaw County commuters have the shortest commutes (22.5 minutes on average). The greatest variability in commute time is found among St. Clair County respondents: a third travel 10 minutes or less to work while nearly a quarter (23 percent) travel more than 40 minutes.

### THE STRESS OF COMMUTING

When asked how stressful their commute is, more than a third of respondents (37 percent) say it is never stressful while 57 percent say it is sometimes stressful. The remaining 6 percent say their commute to work or school is always stressful. The least stressed commuters are in St. Clair and Washtenaw Counties while the most stressed commuters are in Oakland and Macomb Counties. Table 2 displays levels of commuter stress by county.

There is a strong relationship between travel time and reported levels of stress while commuting: as travel time increases so does the amount of reported stress. For commuters traveling more than 30 minutes to work or school, 15 percent say their trip is always stressful, while only 2 percent of commuters traveling 30 minutes or less say they are always

Figure 1. Percentage of Stressed Drivers, by Travel Time



The question was: “Are your trips to work or school: always stressful, sometimes stressful, or never stressful?”



stressed by the journey to work or school. Figure 1 displays the relationship between levels of stress and commute time.

Further analysis, however, shows important differences in the relationship between commute times and stress: stress levels for long distance commuters differ between counties. As shown in Figure 2, about 21 percent of Detroit and Wayne County commuters who travel more than 30 minutes say their trips are always stressful, while the same is true for only 4 percent of similar Monroe County commuters.

### PUBLIC TRANSIT USE

In the face-to-face interview, respondents were asked if there was any form of public transportation available to them. Those answering affirmatively were then asked about their use of public transportation. In the mail questionnaire, public transportation use was asked of all respondents. Public transportation use reported in Table 3 below uses responses from the mail portion of the survey only.

Heavy reliance on the automobile throughout the region corresponds with limited use of public transit. Table 3 shows low transit ridership in all counties including those places (e.g., Detroit, Washtenaw County) where public transportation is readily available. For the region as a whole, only 3 percent of respondents are regular transit users or travel by bus at least once a week. Most likely to use public transportation are Detroiters, followed by Washtenaw County residents.

As shown in Figure 3, public transit use is associated with how far people live from a transit stop. People who live within 1/16 of a mile from a bus stop are twice as likely to

use buses as those living between 1/8 and 1/4 of a mile away, and four times as likely to use public transit as those living beyond 1/2 of a mile.

### DECREASING PUBLIC TRANSIT USE OVER TIME

The DAS 2001 question about public transit use was also asked in earlier surveys carried out in the more limited tri-county metro Detroit area. As Figure 4 indicates, transit ridership throughout Wayne, Oakland, and Macomb Counties and the city of Detroit has dramatically decreased since the mid-1970s.

### CHARACTERISTICS OF PUBLIC TRANSIT USERS

With the exceptions of the city of Detroit and Washtenaw County, the study sample included insufficient numbers of transit users in the metro area to determine who, for the region as a whole, is most likely to use available public transportation. In Detroit, regular transit users, or those riding buses at least 3 times a week, are more than twice as likely to be African American as white, have incomes of less than \$30,000, and not own an automobile. In Washtenaw County, frequent users

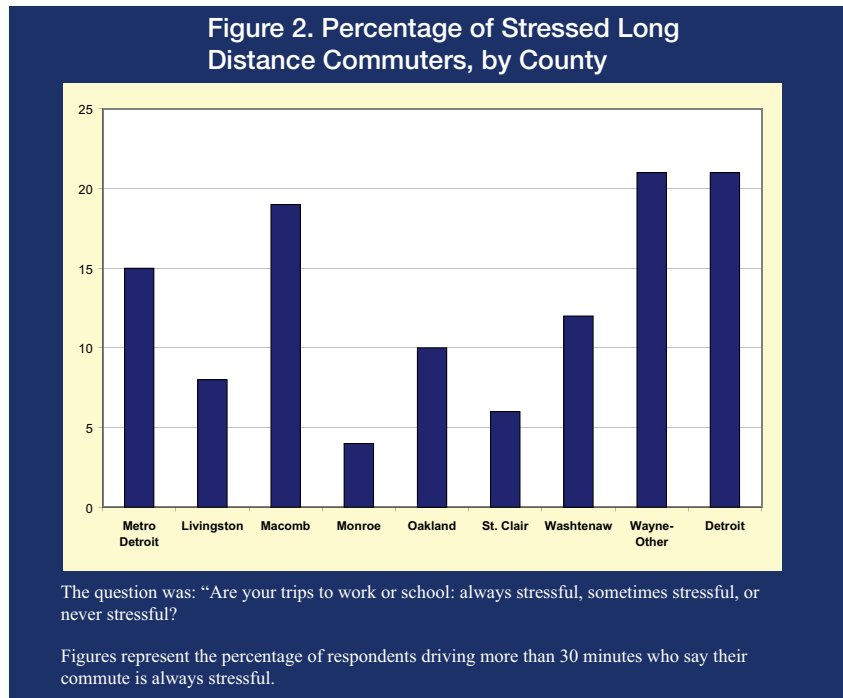


Table 3. Public Transportation Use, by County

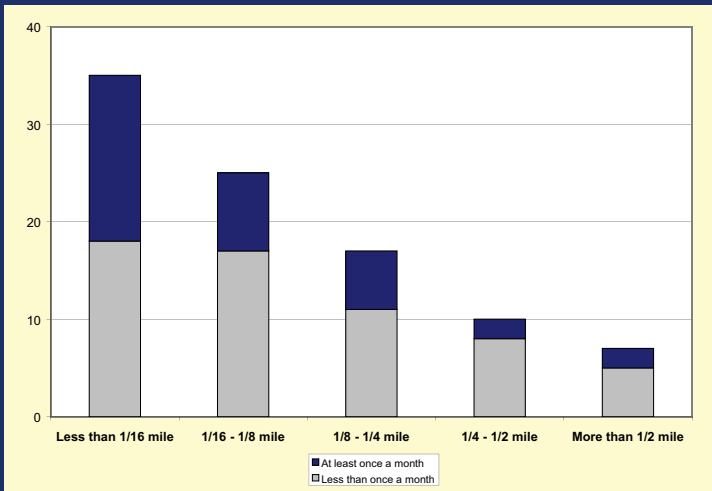
Frequency of Use	Metro Detroit	Livingston	Macomb	Monroe	Oakland	St. Clair	Washtenaw	Wayne-Other	Detroit
Daily or almost daily	2	2	2	1	*	*	3	*	5
1 - 3 times a week	1	0	1	*	1	1	4	*	3
1 - 3 times a month	1	0	*	1	*	1	3	1	5
Less than once a month	10	8	5	12	5	3	26	6	23
Never	86	90	92	86	94	95	64	93	64
Total	100	100	100	100	100	100	100	100	100

The question asked of respondents who were working or going to school was: "How do you usually get to work or school?"

Figures represent the percentage of respondents from the mail portion of the survey only. \* Indicates less than one half of one percent.



Figure 3. Public Transit Use, by Distance to Nearest Bus Stop



Figures represent the percentage of respondents who use public transit.

also tend to have incomes of less than \$30,000, have no cars in the household, and are either employed full time or are students.

### RATINGS OF LOCAL PUBLIC TRANSPORTATION

When asked to evaluate the public transportation available to them in their neighborhoods, nearly a third of respondents rate public transit favorably, a third rate it negatively, and the remaining third give local public transit a neutral score. The most favorable ratings come from Washtenaw County and the city of Detroit, where about half of respondents say that public transit available to them is either

good or very good. At the same time, a quarter of the Washtenaw County respondents and half of those in Detroit rate local public transit as not very good or not good at all.

When considering public transit ratings by respondents from different types of places, the most favorable ratings come from respondents in large cities outside the urban core (e.g., Ann Arbor and Pontiac), while the least favorable ratings come from respondents in small cities and villages, rural areas, and the newer suburbs. Table 4 displays the wide range of respondent evaluations of local public transit by type of place, and summarizes the differences in the “favorable/unfavorable ratio.” This ratio represents the percentage of respondents

who rate public transit as either ‘very good’ or ‘fairly good’ divided by the percentage of respondents who rate public transit as either ‘not very good’ or ‘not good at all.’

### RATINGS OF TRANSPORTATION IN THE REGION

Metro area residents have mixed opinions about the overall transportation system in the region. When asked to rate the region’s system in terms of freeways, roads and public transit, only 33 percent give the system good marks while 45 percent rate it poorly. Overall, transportation in the region is rated slightly below average. Poorest ratings come from the core counties of Oakland, Wayne, and Macomb and from the city of Detroit.

### QUALITY OF LIFE

Many respondents believe that quality of life in the region could be improved with better public transit. In response to the statement, “Public transit that is safe and reliable would improve the quality of life of metro Detroit residents,” a significant number (69 percent) from all parts of the region “strongly agree” or “agree.” Whereas most Detroiters (80 percent) believe there are quality of life benefits from public transit, at least two-thirds of the respondents in out-county Wayne and in Oakland, Macomb, Washtenaw and Livingston Counties also agree with the statement. Less than 10 percent disagree with the statement.

### NEED FOR PUBLIC TRANSPORTATION

Respondents in the tri-county area (i.e., Wayne, Oakland and Macomb Counties) who

Table 4. Evaluation of Public Transportation, by Type of Place

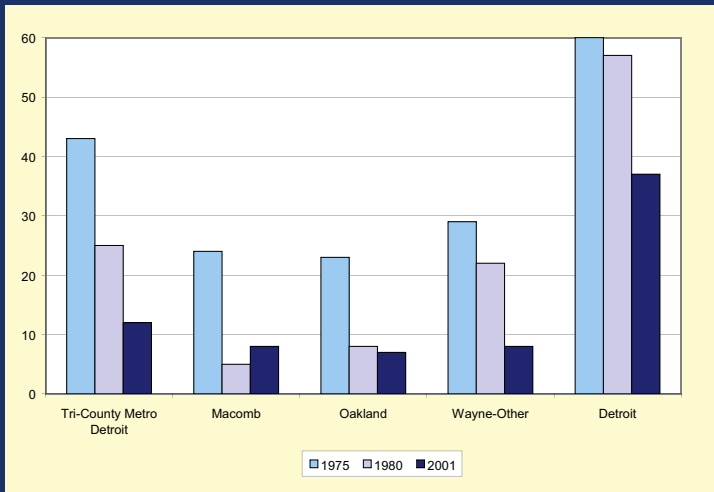
Rating of Public Transit in Neighborhood	Metro Detroit	Urban Core	Older Suburbs	Large Cities	Mid-Size Cities	Small Cities	Newer Suburbs	Rural
Very good	9	14	8	36	9	6	6	4
Fairly good	22	35	23	37	38	9	15	14
Neither good nor bad	32	18	39	17	33	25	35	33
Not very good	18	23	17	8	17	16	19	16
Not good at all	19	10	13	2	3	44	25	33
Total	100	100	100	100	100	100	100	100
Favorable/unfavorable ratio	0.8	1.5	1.0	7.3	2.4	0.3	0.5	0.4

In the face-to-face interviews, the question was: “Overall, how good is the public transportation for people who live around here?” In the mail survey, the question was: “Please rate each of the following public services and facilities in your neighborhood.” Public transportation was one of the services listed.

Figures represent the percentage of respondents answering in various categories.



Figure 4. Public Transit Use Over Time, by Location



Figures represent the percentage of respondents who use public transit.

have some form of public transportation available to them were asked, “How difficult would it be for you to get around without public transportation?” Although the number of respondents asked this question outside the city of Detroit was too small to report meaningful statistics, the responses from Detroit residents indicate the importance of public transportation to their quality of life: most respondents report that it would be very difficult (58 percent) or somewhat difficult (27 percent) to get around without public transportation.

For those in the tri-county area who do not have access to public transportation, nearly half (46 percent) say they would be strongly in favor of making it available for people living in their neighborhoods and another 39 percent say they would be somewhat in favor. Only 15

percent indicate they would not be in favor of making public transportation available.

Public transportation is also on the minds of many metro area residents when asked to comment on other aspects of community life. More than one in ten “additional mentions” deal with transportation issues and public transportation is a central concern, with most comments in favor of improved public transit. For example, one Livingston County resident writes: “A BIG issue in this ever-increasing congested area is public transit....the driving is deplorable, time-consuming, and stressful (poor manners for so many).” An Oakland County respondent notes: “I believe public transportation is important not just to get people to jobs, but also for an aging population.”

## WILLINGNESS TO PAY FOR TRANSPORTATION IMPROVEMENTS

Although most respondents support the idea of public transit for the region, their support is tempered when asked if they are willing to pay more in taxes to make public transportation improvements. While one-third of respondents say they would increase their tax bill for this purpose, another third indicate they would not, and the remainder give a neutral response. Detroiters are the most willing to pay for improvements to public transportation whereas respondents in St. Clair and Monroe Counties show the strongest opposition to a tax increase for this purpose.

Comparing respondents who believe public transit is important and are willing to pay taxes to support it (strong supporters) with those who think it is important but are not willing to pay taxes for it (weak supporters), this study finds that strong supporters significantly outnumber weak supporters in Detroit and Oakland County. While strong and weak supporters are nearly equal in Wayne, Macomb and Washtenaw Counties, weak supporters outnumber strong supporters in Livingston, St. Clair, and Monroe Counties. Public transit proponents are seven times more likely to be found in Detroit than in Monroe and St. Clair Counties and are nearly twice as likely to be in Detroit compared to Oakland County. Table 5 displays the commitment to public transit by county.

Although there is general support for public transit in the region, questions regarding auto travel reveal stronger sentiments and a greater commitment to private transportation, especially by non-Detroiters. While Detroit respondents are as likely to support spending on road improvements as on public transit improvements, the wider metro area residents are

Table 5. Commitment to Public Transit, by County

Commitment	Livingston	Macomb	Monroe	Oakland	St. Clair	Washtenaw	Wayne-Other	Detroit
Strong supporters	29	30	16	46	23	33	32	57
Weak supporters	36	27	33	24	46	31	28	16
Support score	0.8	1.1	0.5	1.9	0.5	1.1	1.1	3.6

Figures are the percentage of respondents who are strong supporters (favor public transit and are willing to pay more in taxes for improvements) or weak supporters (favor public transit but are not willing to pay more in taxes for improvements) of public transit. Support score represents the ratio of strong to weak supporters of public transit.



much more willing to pay for improvements to county roads and highways than for public transit improvements.

For most respondents, county road improvements mean addressing traffic congestion problems. More than half of metro area respondents would pay for efforts to relieve congestion. Respondents in Oakland (66 percent), Livingston (61 percent), and Macomb (58 percent) Counties are most concerned about congestion and are willing to pay to relieve it. Not surprisingly, least committed to dealing with congestion through a tax increase are respondents from Monroe and St. Clair Counties (38 percent and 41 percent, respectively).

## SUMMARY

This report has presented findings about travel, transportation, and mobility of residents in southeast Michigan. Key findings include:

1. Metro area residents are heavily reliant on their automobiles for travel, with residents of the city of Detroit slightly less so. This heavy reliance on private transit options corresponds with very limited use of public transit across the region. And significantly, this study finds decreasing use of public transit compared to findings from the 1970's and 1980's. This study also finds a strong relationship between proximity to the nearest bus stop and reported use of public transit, with decreasing use as the distance from the bus stop increases.

2. Although the average commuting time in metro Detroit is lower than in places like Chicago and Los Angeles, nonetheless, nearly two-thirds of metro Detroiters consider the work trip stressful. And there is a strong relationship between travel time and levels of stress: as travel time increases, so does the amount of reported stress. This relationship, however, is also affected by the commuter's location, with Detroit and Wayne County long distance commuters (those traveling more than 30 minutes) significantly more likely to report stress than those commuting 30 minutes or more from St. Clair or Monroe Counties.

3. Most people believe that safe and reliable public transit is important to the quality of life of metro area residents. City of Detroit residents are most likely to believe in the importance of public transportation (80 percent) whereas those in Monroe and St Clair Coun-

ties are least likely to believe in its importance (60 percent). However, this general support for public transit is tempered when respondents are asked to pay more in taxes to support it. Only one third of metro area residents say they would be willing to increase their tax bill to improve and expand public transit in the region. Meanwhile, support for road and highway improvements is twice as high as support for improving public transit.

## CONCLUSION

While deliberating changes to southeast Michigan's transportation system, state and local policymakers will need to account for the thoughts, values, and actions of their constituents, such as those reported here. Both constraints and opportunities await policymakers as they consider improvements to southeast Michigan's existing mass transit system, and possible development of new options like a light rail line from Detroit to Ann Arbor and perhaps beyond. On one hand, policymakers face constraints such as limited support for tax increases to improve public transit. On the other hand, policymakers will find widespread public belief that quality of life improvements could result from improved public transit.

Further, while some analysts may conclude that today's very limited (and declining) use of public transit means southeast Michigan residents are committed to their cars, others may argue there is a huge untapped pool of potential new users of public transit. Is the glass half-full or half-empty? Perhaps more accurately, is the glass 10% full or 90% empty?

Certainly the political, economic, regulatory, and environmental obstacles against development of new mass transit options are formidable. Still, the federal government has recently provided a \$100M award for the study and possible development of improved mass transit in southeast Michigan. As gasoline prices have skyrocketed towards \$3.00 per gallon in the spring of 2006, media reports from around the country have highlighted noticeable increases in uses of existing mass transit options in other metropolitan areas. Even if today's political and economic dynamics in southeast Michigan may be stacked against improvements in mass transit, tomorrow's circumstances are less clear.

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