US 41 TRANSIT LATENT DEMAND STUDY

Prepared for:
SARASOTA-MANATEE METROPOLITAN PLANNING ORGANIZATION

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September 2004
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CHAPTER 1 INTRODUCTION AND BACKGROUND

In 2002, a Public Transportation System Analysis (PTSA) was completed for the Sarasota-Manatee Metropolitan Planning Organization (MPO). Among the recommendations of this study was a bus rapid transit (BRT) system operating within the US 41 corridor, connecting Ellenton and Palmetto with Bradenton, the airport, downtown Sarasota, and the Sarasota Square Mall. This system would dedicate a north and south bound lane of US 41 for transit and other high occupancy vehicles and would have supporting transit infrastructure, such as shelters, sidewalks and pedestrian amenities, and information kiosks to display bus arrival times and connecting routes. At selected locations along the route, a bus pullout lane that enables northbound and southbound vehicles to pass would augment the single lane for transit vehicles. Such locations should occur at key stops where adjacent land use provides a destination or transfer opportunity.

Service enhancements that increase ridership and provide a viable alternative to the automobile for choice riders are the first step in getting US 41 ready for BRT. Based on the recommendation of the PTSA, the MPO has commissioned this study of US 41 from the Sarasota Square Mall to Port Manatee to determine the demand for service enhancements. The MPO and its partners needed to determine the returns on investment for differing improvement options and to pinpoint areas and market segments that would best support service expansion. Of particular interest is the degree to which service improvements can be expected to capture “choice” riders in the corridor. This Transit Latent Demand Study is designed to answer those questions and provide guidance for a possible grant proposal based on the warranted service enhancements.

The study area for the US 41 Transit Latent Demand Study along with major transit facilities, destinations and routes are illustrated in Figure 1. The service delivery enhancements evaluated for this study include expanding the hours of service, increasing the frequencies of bus service and reducing the bus travel times. It is important to note that even though riders must now transfer at the Sarasota/Bradenton International Airport if traveling between Sarasota and Manatee Counties, interlined service will be implemented in October 2004 to eliminate the transfer. Therefore, this service enhancement is not evaluated in the study.

Information collected through surveys that targeted current riders as well as potential “choice” riders was used to evaluate the benefits of providing enhanced service in the US 41 corridor beyond what is currently provided by SCAT and MCAT. The survey results were used in several ways, most importantly to update coefficients in the ITSUP model used to estimate ridership changes caused by the services improvements noted above. Ridership forecasts were then compared with the additional capital and operational costs of each enhancement to determine the most beneficial and economical solution.
Figure 1 - Study Area
CHAPTER 2 CORRIDOR PROFILE

CURRENT TRANSIT SERVICE

Transit service on US 41 is currently provided through four routes: three operated by SCAT and another by MCAT. MCAT operates Route 10 from 17th Street in Palmetto to the Sarasota-Bradenton Airport with transfers to other MCAT routes at the Fairgrounds, the Courthouse in Bradenton and Cortez Plaza. At the Airport, MCAT and SCAT riders are able to transfer from one system to the other in order to continue traveling on US 41. SCAT operates three routes within the US 41 corridor; Routes 2 and 15 provide service from Downtown Sarasota north to the Airport and Route 17 provides service from Downtown Sarasota to Venice. While SCAT Route 15 serves the airport, direct transfers are to MCAT are only possible via SCAT Route 2. A cooperative effort has been undertaken by the transit agencies to determine the necessary steps to interline service between the two agencies’ service area. This interlining of service will eliminate the need for passengers to transfer at the airport when traveling between the counties.

All four of the routes operating in the US 41 corridor currently have one-hour headways and offer approximately 12 to 13 hours of service daily. Service is not currently provided by either agency within the US 41 corridor on Sundays.

Pinellas Suncoast Transit Authority (PSTA) Route 60 operates along SR 60 in Clearwater. Because the development pattern along this corridor is fairly comparable in nature to the US 41 corridor, Route 60 is used to evaluate the efficiency of service along US 41. Even though the PSTA route operates at a higher frequency (20 minute versus hour headways), the passengers per vehicle mile, the only operational data available from MCAT, are almost equal – 2.5 for MCAT’s Route 10 and 2.46 for PSTA. Of the three SCAT routes serving the US 41 corridor, only Route 2 operates exclusively within the US 41 study area. Operating data available from SCAT’s Route 2 indicates that passengers per vehicle revenue hour (as opposed to the passengers per vehicle mile from MCAT) exceed those for PSTA route 60. SCAT Route 2 averages 36 passengers per vehicle revenue hour while PSTA Route 60 averages 28.13.

PHYSICAL CHARACTERISTICS

The US 41 and US 301 corridors that connect Palmetto through downtown Bradenton and Sarasota to the Sarasota Memorial Hospital and South Gate Plaza shopping center are currently the economic and civic heart of the Sarasota/Manatee region. Traffic congestion is projected to increase on roads in this corridor and, with US 41 designated as a constrained corridor between downtown Sarasota and Bradenton, roadway capacity adding projects to relieve the increasing congestion are not feasible.
A recommendation was made in the PTSA study that the two counties jointly prepare redevelopment plans to create compact transit centers. These centers would include clustering of different land uses, such as retail, apartments and offices around stations. At this scale, transit service can be effectively integrated into the walking range of most people.

DEMOGRAPHICS

Household characteristics from the 2000 Census were reviewed in an effort to identify potentially transit supportive areas within the corridor. Maps of this review are included in Appendix A. The maps presented in Appendix A are based on 2000 Census data at the block group level.

Figure A - 1 in Appendix A illustrates population density. Densities are lowest in north of Palmetto and near the airport in Manatee County. The highest densities are found in Bradenton and there is a moderate concentration of people living in the downtown Sarasota area.

Figure A - 2 presents the number of workers per mile based on place of residence, not work. Similar to Figure A - 1, the lowest densities are seen in northern Manatee County and near the airport. Because workers are a subset of the population, the intensity of workers will never exceed and will very rarely equal the intensity of the population. With that in mind, the intensity of workers per square mile in the Bradenton and downtown Sarasota areas is greater than it is elsewhere in the two-county area.

Figure A - 3 presents illustrates the density of workers living in a different county than where they work. This map illustrates the potential for longer work trips. As expected, the concentration of workers who work in a county different than where they live is clustered around the Sarasota/Manatee county line. These areas in also have relatively low population densities.

Figure A - 4 illustrates the percentage of families that had an income in 1999 below the poverty line. There is a cluster of block groups north of downtown Sarasota with a high percentage of low income families and other clusters in the Palmetto area and near downtown Bradenton.

Figure A - 5 presents the percentage of households by blockgroup that did not own an automobile in 1999. While the overall pattern for this is similar to that in Figure A - 4, the areas where the clustering appears are more intense and farther reaching than the distribution of low income households.

Figure A - 6 and Figure A - 7 present the percentage of workers with a commute time of 30 minutes or longer using public transportation and other modes respectively. Similar to the low income and no autos owned maps, there is a concentration of workers north of downtown Sarasota. While Figure A - 7 indicates a relatively small percentage of workers living in this area travel more than 30 minutes for their daily commute, transit opportunities exist along the entire
corridor as many of the block groups have zero workers using public transportation for work trips of 30 minutes or more.

**POPULATION FORECASTS**

Using the 1990 and 2000 Census populations, future year population estimates developed by the Bureau for Economic and Business Research (BEBR) at the University of Florida and socioeconomic data used by the MPO in the 2020 Long Range Transportation Plan, a growth rate was developed to interpolate year 2008 population. This population estimate was used as an input to the Integrated Transit Demand and Supply (ITSUP) Model developed by Professor Ram Pendyala at the University of South Florida for determining future transit demand based on the service delivery enhancements desired for the short-term.

As mentioned, several sources were used to develop an appropriate population estimate for the analysis. A growth rate was determined for the combined populations of Manatee and Sarasota Counties using the 1990 and 2000 Censuses, 2010 and 2020 BEBR projections and the Sarasota-Manatee Area Transportation Study (SMAT) 2005 and 2025 socioeconomic projections. The population figures used to develop forecast growth rates are included in Table 1.

Sarasota and Manatee Counties experienced over 20 percent population growth, or nearly 2 percent growth per year, during the 1990’s according to the Census figures. The population growth for the US 41 study area decreased during the same time period at an annualized rate of slightly more than one percent per year.

Year 2010 and 2020 BEBR estimates used for this analysis were based on the medium population forecasts, the most likely forecasts within a range provided by BEBR. As shown in Table 3, population growth anticipated by the BEBR projections is around 14 percent over a 10-year span, or 1.38 percent per year. Because BEBR projections are made at the county level, it was not possible to evaluate the anticipated change within the study area.
Table 1 -- Historic and Estimated Population

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>YEAR</th>
<th>COUNTY-WIDE</th>
<th>STUDY AREA</th>
<th>PERCENT IN STUDY AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census</td>
<td>1990</td>
<td>489,483</td>
<td>40,068</td>
<td>8.19%</td>
</tr>
<tr>
<td>Census</td>
<td>2000</td>
<td>589,959</td>
<td>35,947</td>
<td>6.09%</td>
</tr>
<tr>
<td>BEBR</td>
<td>2002</td>
<td>626,200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BEBR</td>
<td>2010</td>
<td>693,000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BEBR</td>
<td>2020</td>
<td>794,900</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SMATS</td>
<td>2005</td>
<td>655,352</td>
<td>56,935</td>
<td>8.69%</td>
</tr>
<tr>
<td>SMATS</td>
<td>2025</td>
<td>922,111</td>
<td>62,590</td>
<td>6.79%</td>
</tr>
</tbody>
</table>


Socioeconomic data from the SMATS model used for the Sarasota-Manatee MPO LRTP anticipates a 10-year population growth of more than 16.5 percent, or slightly more than 1.5 percent annual growth, countywide (Table 3). The growth within the US 41 corridor was more than 4 percent over 10 years with an annualized rate of less than one-half percent growth per year.

Given the various forecasts, an annual growth rate of two percent was used to estimate the countywide and study area population. The result is a 2008 population estimate of 691,230 for both counties and 42,117 for the US 41 study area. For the ITSUP model, the 2008 study area population of 42,117 was divided among the Census block groups based on the distribution of the 2000 Census block group population within the study area. Appendix B shows the resulting population by block group.
Table 2—Projected Population Growth Rates

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>COUNTY-WIDE</th>
<th>STUDY AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 YEAR GROWTH RATE</td>
<td>ANNUALIZED GROWTH RATE</td>
</tr>
<tr>
<td>Census</td>
<td>20.53%</td>
<td>1.88%</td>
</tr>
<tr>
<td>BEBR</td>
<td>14.70%</td>
<td>1.38%</td>
</tr>
<tr>
<td>SMATS (1)</td>
<td>16.61%</td>
<td>1.55%</td>
</tr>
<tr>
<td>Selected</td>
<td>N/A</td>
<td>2.00%</td>
</tr>
</tbody>
</table>

(1) Growth rates from the SMATS model network were derived by taking the 20 year growth from 2005 to 2025 and interpolating the population for the 10th year to establish growth rates.
CHAPTER 3 SURVEYS

The survey effort targeted current users of MCAT and SCAT services as well as the general population that lives, works and shops within the US 41 corridor. The goal of the survey effort was to identify characteristics of the current riders as well as the willingness of choice/potential riders to use transit based upon a series of proposed enhancements to the existing transit service in the US 41 corridor.

The distribution of three different non-rider surveys was a coordinated effort that targeted employment centers, shopping centers, medical facilities, leisure activities and residences within the study area to gain input from potential riders. An onboard survey was also conducted of MCAT and SCAT patrons within the US 41 corridor to identify current rider characteristics. Table 3 identifies the survey delivery methods and the locations where the survey was distributed.

Table 3 -- Survey Delivery Methods

<table>
<thead>
<tr>
<th>SURVEY TYPE</th>
<th>TARGETED LOCATIONS</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>2,000 randomly selected households within ¼ mile of study area</td>
<td>214</td>
</tr>
<tr>
<td>Mail Out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept /</td>
<td>Libraries and museums;</td>
<td>111</td>
</tr>
<tr>
<td>Handout</td>
<td>Sarasota Square Mall;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Southgate Shopping Center;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiple hotels</td>
<td></td>
</tr>
<tr>
<td>Web Based</td>
<td>Major employment locations or groups;</td>
<td>173</td>
</tr>
<tr>
<td></td>
<td>Sarasota Memorial Hospital;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Port Manatee;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colleges</td>
<td></td>
</tr>
<tr>
<td>On Board</td>
<td>MCAT route 10; SCAT routes 2, 15 and 17</td>
<td>177</td>
</tr>
<tr>
<td></td>
<td>Major transfer centers</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>675</td>
</tr>
</tbody>
</table>

The distribution of the non-rider surveys occurred during April, and the intercept and on board surveys took place on April 1st and April 2nd. The non-rider surveys sent to residents were mailed out during the second week of April. Employers and colleges participating in the email survey
were contacted in March and April with information that could easily be distributed to employees and students.

**NON-RIDER SURVEY**

As presented in Table 3, three methods were used to distribute surveys to non-transit riders; a residential mail-out, an intercept hand-out and through the web. All three non-rider surveys included the following three sections:

- Section A: Household Information;
- Section B: Regular Trip Characteristics; and
- Section C: Transit Enhancement Scenarios.

Examples of each of the non-rider based surveys are included in Appendix C.

**RESIDENTIAL SURVEY**

The distribution pattern for the residential mail out survey was developed using the 2000 Census population in conjunction with GIS data to identify the number of households within Census block groups that should receive the survey. A ¼ mile buffer was drawn around the US 41 corridor and used to identify the area of each Census block group that fell within ¼ mile of the corridor. The population of those block groups was then adjusted based on the percentage of the total block group area within this buffer. The population within each block group’s buffer was then divided by the total population within the ¼ mile buffer. These percentages were then applied to the 2,000 total surveys sent out in order to identify how many households from each block group should be selected.

Two versions of the residential survey were created in order to evaluate two variations of transit service enhancements. Both version of the residential mail out surveys are included in Appendix C. The difference on these two forms is found in questions 10 and 11 where the respondents are asked to indicate their willingness to use transit if the bus travels as fast as autos in one version and half as fast as autos in the other version.

**INTERCEPT SURVEY**

The intercept surveys were handed out at the following locations on April 1st and 2nd:

- Bradenton Library;
- Sarasota Memorial Hospital;
- Sarasota Square Mall;
• Selby Public Library; and
• Southgate Shopping Center.

Additional intercept surveys were left at the Ringling Museum information desk for visitors to pick up. Several hotels within the corridor also participated in the survey, where surveys were placed in the lobbies for visitors to the area to complete. Sample intercept and hotel surveys are included in Appendix C.

WEB BASED SURVEY

The groups that agreed to participate in the web survey included:

• Bradenton Chamber of Commerce;
• New College;
• Manatee Community College;
• Port Manatee;
• Ringling School of Arts;
• Sarasota Chamber of Commerce;
• Sarasota Downtown Partnership; and
• Sarasota Memorial Hospital.

NON-RIDER SURVEY RESULTS

One of the important pieces of information that was collected from the survey process was the location of trip origins and destinations of transit riders and potential riders alike. Figure 2 provides a composite view of trips origins while Figure 3 indicates the destinations from the survey responses. The figures illustrate the distribution of trip ends among survey respondents to provide a sense of where most trips begin and end. As shown on Figure 2, the highest concentrations of trip origins occurs in and around downtown Sarasota and Bradenton, with the highest concentration located just south of downtown Sarasota. Interestingly, areas directly east and west of Bradenton generate few corridor trips, while areas east of the Sarasota/Bradenton Airport and Sarasota generate a moderate number of trips. This suggests that the travel markets directly east and west of Bradenton focus on downtown Bradenton, while the eastern travel markets between Bradenton and Sarasota use the US 41 corridor to travel to either downtown Bradenton or Sarasota. As a result, corridor ridership will be increased more with feeder bus service along roads south of Bradenton, Such as University Boulevard and Fruitville Road than with service east or east of Bradenton.
Figure 3
Trip Destinations

US 41 Corridor
Number of Destinations
- 0 - 2
- 3 - 6
- 7 - 14
- 15 - 26
- 27 - 55

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Trip destinations show the same general pattern as trip origins. The notable difference in trip destinations versus trip origins is the higher concentrations of destinations east and north of downtown Sarasota.

In addition to reviewing the characteristics of the countywide demographics, selected attributes collected through the study’s surveys were compiled and compared against the 2000 Census. The comparisons, presented in Table 4, provide an assessment of how well the survey sample matched the general public. In general the survey sample over-represents workers, higher income households and households with cars available. This suggests that survey results are clearly biased towards those who have choice towards using transit.

### Table 4 – US 41 Corridor Demographics

<table>
<thead>
<tr>
<th>DEMOGRAPHIC</th>
<th>2000 CENSUS</th>
<th>SURVEY SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>33.6%</td>
<td>58.3%</td>
</tr>
<tr>
<td>Part-time</td>
<td>23.5%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Did not Work</td>
<td>41.0%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Worked at Home</td>
<td>1.8%</td>
<td>15.6%</td>
</tr>
<tr>
<td><strong>Annual Household Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $25,000</td>
<td>36.6%</td>
<td>13.8%</td>
</tr>
<tr>
<td>$25,000 to $50,000</td>
<td>31.8%</td>
<td>27.9%</td>
</tr>
<tr>
<td>$50,000 to $75,000</td>
<td>16.1%</td>
<td>24.5%</td>
</tr>
<tr>
<td>$75,000 to $100,000</td>
<td>6.6%</td>
<td>15.0%</td>
</tr>
<tr>
<td>More than $100,000</td>
<td>8.9%</td>
<td>18.8%</td>
</tr>
<tr>
<td><strong>Household Auto Ownership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero</td>
<td>10.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>One</td>
<td>50.2%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Two</td>
<td>31.1%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Three or more</td>
<td>8.2%</td>
<td>15.6%</td>
</tr>
</tbody>
</table>
ON BOARD SURVEY

The purpose of the on board survey was different from that of the non-rider survey; it was to collect information about existing SCAT and MCAT riders. The on board survey included questions about the users’ typical transit usage as well as demographic information. The information from this survey aided in developing the typical usage patterns in the US 41 corridor and the socioeconomic attributes of the current riders based on existing transit operations. This survey was conducted at major transfer points as well as on the routes serving the US 41 corridor. A sample survey has been included in Appendix C.
CHAPTER 4 DATA ANALYSIS

Data analysis was conducted in two phases: the first was a review and summary of survey responses and the second was an evaluation of differing transit scenarios using the ITSUP model. Survey results determined likely user response to transit service enhancements that was used to modify the ITSUP model and to provide insights into nuances that a model is not capable of capturing. The ITSUP transit model was run using adjustments based on the survey results and assuming population forecasts and transit delivery enhancements to estimate ridership.

SURVEY RESULTS

EXISTING SERVICE CHARACTERISTICS

The surveys asked several questions about current SCAT and MCAT services for those respondents who have used the services. Survey questions asked respondents to rate the hours of operation, time spent waiting for a bus, buses arriving on time and the area served by transit using a scale of one to five, with one indicating excellent service and five indicating poor service. Table 5 presents how respondents rated the four service characteristics and provides an average score for each. The higher the average, the less satisfied respondents were. Among the four service characteristics, respondents were least satisfied with the hours of operation and the time spent waiting for the bus.

Table 5 – Transit Operation Evaluations

<table>
<thead>
<tr>
<th>SERVICE CHARACTERISTIC</th>
<th>TOTAL RESPONSES</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>AVERAGE SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of operation</td>
<td>102</td>
<td>19</td>
<td>14</td>
<td>18</td>
<td>11</td>
<td>40</td>
<td>3.38</td>
</tr>
<tr>
<td>Time spent waiting for the bus</td>
<td>97</td>
<td>11</td>
<td>17</td>
<td>29</td>
<td>14</td>
<td>26</td>
<td>3.28</td>
</tr>
<tr>
<td>Buses arriving on time</td>
<td>98</td>
<td>21</td>
<td>32</td>
<td>25</td>
<td>7</td>
<td>13</td>
<td>2.58</td>
</tr>
<tr>
<td>Area served by transit</td>
<td>98</td>
<td>19</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td>22</td>
<td>3.03</td>
</tr>
</tbody>
</table>

Figure 4 graphs the distribution of responses to the service characteristics. The most telling result from the distribution was forty percent of the respondents rated the hours of operation as poor. Also of interest is that over half of the respondents believed that buses arriving on time was either excellent or good. Overall, the results indicate that most of the dissatisfaction with transit is due to the lack of service (limited service times and areas) rather than the provision of service.
SERVICE ENHANCEMENTS

Transit service enhancement scenarios were developed for the survey to determine likely reactions to changes in service characteristics. The scenarios tested four service delivery variables – changes in frequency (headways), hours of operation, bus travel speed and the need to transfer. The questions varied on each survey so that the entire range of service options could be presented without overwhelming a respondent. The survey versions are presented in Appendix C.

Using a scale ranging from not likely to likely, respondents evaluated their willingness to use transit assuming various service improvements as reflected in the scenarios presented. Table 6 summarizes the results by three of the four variables tested. The top portion of the table presents the percentages of respondents who would not use transit regardless of the scenario, the middle portion presents the percentages who may use transit and the bottom portion presents the percentages who would likely use it.

Under the best of conditions (high bus speeds, no transfer times and a maximum 15 minute wait) around a third of respondents indicated they would not use transit and slightly more than a third indicated they likely would. Under the worst conditions (low bus speeds, 30 minute transfer time
and 30 minute wait time) the 90 percent of respondents would not use transit and none would likely use it.

Table 6 – Responses to Service Scenarios

<table>
<thead>
<tr>
<th>NOT LIKELY TO USE TRANSIT</th>
<th>Transfer Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Bus Speed</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Wait Time</strong></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Low</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAYBE</th>
<th>Transfer Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Bus Speed</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Wait Time</strong></td>
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</tr>
<tr>
<td>High</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>30</td>
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<tr>
<td>Low</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>PROBABLY/LIKELY</th>
<th>Transfer Time</th>
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<tr>
<td><strong>Bus Speed</strong></td>
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<tr>
<td><strong>Wait Time</strong></td>
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<tr>
<td>High</td>
<td>15</td>
</tr>
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<tr>
<td>Low</td>
<td>15</td>
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<td>30</td>
</tr>
</tbody>
</table>
Results indicate that increases in transfer times discourage the willingness to use transit significantly more than bus speeds and wait times. For example, assuming high bus speeds and 15 minute wait times, the percentage of likely users drops from 37 percent assuming no transfers to two percent assuming a 30 minute transfer wait. With high bus speeds and a 15 minute transfer, the percentage of likely users drops from 20 percent assuming a 15 minute bus wait to 14 percent assuming a 30 minute wait. Bus speeds had the least influence over the likelihood to use transit. The survey results clearly support the current effort by SCAT and MCAT to interline service along US 41 to eliminate transfers at the airport as the most important service improvement to make in the corridor.

While not specifically asked about integrating service between SCAT and MCAT, several individuals responded that the transfers at the Airport were inconvenient. Many responses were also received that highlighted the need for Sunday service in conjunction with providing additional service hours during the week.

**TRANSIT MODEL**

The ITSUP model was used for its ability as a short term transit operations planning tool to develop ridership estimates based on a series of transit service scenarios. To more closely evaluate the results of the model, the corridor was divided into four segments (Figure 5). These segments reflect current operations by MCAT and SCAT. The seven scenarios tested in ITSUP were:

- Scenario one - existing service plus an extension north to Moccasin Wallow Road;
- Scenario two - increased frequency to 30 minutes on segments two and three
- Scenario three - increased frequency to 15 minutes on segments two and three and 30 minutes on segments one and four;
- Scenario four – 60 minute frequency on segment one and increased frequency to 30 minutes on segments two, three, and four;
- Scenario five - extended service by four hours on all four segments;
- Scenario six - combined scenario four and scenario five; and
- Scenario seven - was the same as scenario six with the elimination of service on segment one.

Adjustments to the travel time were not considered in these seven scenarios because equations in ITSUP that estimate demand for transit do not include a travel time variable. This limitation was not considered a problem because, as noted above, survey responses indicated that changes in bus speeds had very little affect over the willingness to use transit. Furthermore, a scenario that evaluated interlining service was not tested because such an improvement will be made in the near future by SCAT and MCAT.
Figure 5 - US 41 Transit Analysis Sections

US 41 Corridor

Transit Segments

1
2
3
4

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2 1 0 2 4 Miles
As was indicated previously, the corridor’s population growth was estimated to increase two percent annually from 2000 to 2008. This population increase was entered into ITSUP and used in testing each of the seven scenarios. The changes in ridership estimated by ITSUP between each scenario and the base condition were not as high as predicted by survey results. Consequently, the final ridership estimates are an average of estimates from survey results and those from ITSUP. The average accounts for demand as determined by the survey and service modifications determined by ITSUP.

Table 7 lists the scenarios and annual ridership estimates for the study area based on the service modifications. The estimates under the 2000 column assume likely changes assuming the year 2000 study area population. The estimates under the 2008 column assume the 2008 population estimate. Increases in both columns reflect ridership differences between each scenario tested to Scenario 1, which reflects existing service characteristics. As shown in Table 7, ridership increases between 2000 and 2008 for each scenario because of population increases.

Table 7 – ITSUP/Survey Annual Ridership Estimates

<table>
<thead>
<tr>
<th>SERVICE SCENARIO</th>
<th>2000</th>
<th></th>
<th>2008</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RIDERSHIP</td>
<td>INCREASE</td>
<td>RIDERSHIP</td>
<td>INCREASE</td>
</tr>
<tr>
<td>1 – Existing service</td>
<td>222,000</td>
<td>N/A</td>
<td>234,000</td>
<td>N/A</td>
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<tr>
<td>2 – 30 min. headway Bradenton to Sarasota</td>
<td>299,000</td>
<td>35%</td>
<td>315,000</td>
<td>35%</td>
</tr>
<tr>
<td>3 – 15 min. headway Bradenton to Sarasota</td>
<td>443,000</td>
<td>99%</td>
<td>464,000</td>
<td>98%</td>
</tr>
<tr>
<td>4 – 30 min. headway Bradenton to Sarasota Mall</td>
<td>274,000</td>
<td>23%</td>
<td>359,000</td>
<td>53%</td>
</tr>
<tr>
<td>5 – Extend service four hours</td>
<td>241,000</td>
<td>9%</td>
<td>254,000</td>
<td>8%</td>
</tr>
<tr>
<td>6 – Extend service and 30 min. headway</td>
<td>369,000</td>
<td>66%</td>
<td>387,000</td>
<td>65%</td>
</tr>
<tr>
<td>7 – Extend service, 30 min. headway, no extension</td>
<td>299,000</td>
<td>35%</td>
<td>314,000</td>
<td>34%</td>
</tr>
</tbody>
</table>

The ridership estimates indicate that scenario three - 15 minute frequency on segments two and three and 30-minute frequency on segments one and four – would generate the greatest increase among the scenarios tested (98 percent increase over scenario one in 2008). Scenario 5, simply extending the service hours on all routes generated the lowest increase in ridership. Scenario 6 combines the service enhancements of Scenario 4 - increased frequency - and Scenario 5 – increased hours of service. This combining of service enhancements results in ridership estimates that are 65 percent greater than Scenario 1.
The greatest increases in ridership to service enhancements were experienced south of Palmetto – segments two, three and four. Reducing the headways had the greatest impact on ridership with a proportionally larger increase for a 15-minute headway than a 30-minute headway.

**IMPLEMENTATION COSTS**

The benefits of providing better services come at a cost. It is critical to identify the costs of providing service enhancements in order to adequately assess the appropriate course of action, ultimately resulting in the selection of an alternative that is both affordable and provides the greatest benefit. Table 8 lists the enhancement scenarios and the costs of operating each. Also presented in this table is the cost per passenger trip for each scenario based on the ridership estimates. This performance measure is used to evaluate the efficiency of the provided service.

**Table 8 – Cost of Providing Enhanced Service**

<table>
<thead>
<tr>
<th>SCENARIO</th>
<th>ANNUAL OPERATING COST*</th>
<th>PERCENT INCREASE</th>
<th>2000 COST PER PASSENGER*</th>
<th>PERCENT INCREASE</th>
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<tr>
<td>Scenario 1</td>
<td>$465,000</td>
<td>N/A</td>
<td>$2.09</td>
<td>N/A</td>
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<tr>
<td>Scenario 2</td>
<td>$775,000</td>
<td>67%</td>
<td>$2.59</td>
<td>24%</td>
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<tr>
<td>Scenario 3</td>
<td>$1,240,000</td>
<td>167%</td>
<td>$2.80</td>
<td>34%</td>
</tr>
<tr>
<td>Scenario 4</td>
<td>$775,000</td>
<td>67%</td>
<td>$2.27</td>
<td>8%</td>
</tr>
<tr>
<td>Scenario 5</td>
<td>$679,000</td>
<td>46%</td>
<td>$2.81</td>
<td>35%</td>
</tr>
<tr>
<td>Scenario 6</td>
<td>$1,132,000</td>
<td>144%</td>
<td>$3.06</td>
<td>47%</td>
</tr>
<tr>
<td>Scenario 7</td>
<td>$906,000</td>
<td>95%</td>
<td>$3.02</td>
<td>45%</td>
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</table>

* Costs are based on an assumed operating cost of $41.66 per vehicle revenue hour. The average cost for extended hours was higher ($64.49) to account for the added expenses of longer service, such as dispatchers having to stay extra hours. This added cost does not assume extended hours on any other routes in the system, which could pose operational and service problems because riders will likely want to transfer to other routes during the extended periods. Therefore, extended hours would likely require extending operations system-wide, thereby increasing costs even further.
CHAPTER 5 SUMMARY AND RECOMMENDATIONS

The Sarasota-Manatee MPO has conducted this US 41 Latent Demand Study to evaluate the need for and possible enhancements to the transit service currently offered in the US 41 corridor. The study used a survey designed to gain the input of potential users of the system and a transit demand model that forecasted expected levels of demand based on socioeconomic input factors and modifications to the level of service provided.

To better understand community sentiment for transit, non-rider surveys were distributed to households within a ¼ mile of US 41, major employers, shopping and social destinations, and the nearby colleges. Survey results showed strong support for eliminating transfers and transfer wait times and extending the hours of operation. A rider survey captured responses from current users of SCAT and/or MCAT services. Like the non-rider survey, respondents wanted increased hours of operation and less waiting times.

Using information from the surveys reflecting local willingness to use transit, the ITSUP model was used to test eight transit enhancement scenarios that ranged from the existing service characteristics to increasing the service period by four hours and reducing headways to 15 minutes. ITSUP ridership estimates for each scenario tested were adjusted based on survey results.

The analysis indicated that service changes could increase ridership in the corridor by up to 99 percent. Annual ridership in 2008, expected to be around 234,000 under existing service conditions, would increase to around 464,000 assuming the most aggressive improvement scenario tested. This translates to around 730 more riders per day using an annualization factor of 313, which shifts around 610 daily auto trips to transit assuming average auto occupancies of 1.2 persons per vehicle.

Operating costs were then developed for each of the seven alternative transit scenarios. Costs increased from 46 percent to 144 percent over the base scenario. The cost per passenger trip was also calculated to determine how costs compared in relation to the ability to attract new riders. Because of the existing efficiency of the existing service and the fact that the existing service is used by so few choice riders, the cost per rider will increase for all of the scenarios. This increase is not unexpected given the comparative difficulty in attracting choice riders. However, Scenario 4, reducing headways for the three existing segments of the route to 30 minutes, only increased the cost per rider by eight percent.

The course of action recommended for the Sarasota-Manatee MPO is to implement a variation of Scenario 4 that does not include the extension of service northward. The ITSUP evaluation indicated little benefit of extending service from 17th Street in Palmetto to Moccasin Wallow Road.
Instead, the service enhancements should be focused between Palmetto and the Sarasota Square Mall.

The annual ridership on the recommended Scenario (310,000) is about eight percent less than Scenario 4 (340,000) but the annual operating cost ($620,000) is around 20 percent less than Scenario 4 ($774,000), resulting in a cost per rider that is lower than the existing service ($2.00 versus $2.27). The cost per rider is also around four percent lower than the cost per rider of existing service ($2.09), indicating the improvement is cost effective.

The recommended improvement does not extend service into areas not currently served. As a result, there are no changes in compliance with the American Disabilities Act (ADA) regarding the provision of paratransit service.

For monitoring and performance purposes, it is recommended that implementation of these service enhancements not coincide directly with the interlining of service that is currently being pursued by MCAT and SCAT on US 41. This interlining of service, scheduled for implementation in October 2004, is intended to provide continuous service from Palmetto to Downtown Sarasota without the need to transfer at the Sarasota-Bradenton Airport. The projections and recommendations from this report should be modified based on the demand generated from the interlining of service between SCAT and MCAT to ensure that expected levels of demand documented in this study will still be met or exceeded based on the transit service offered.
Appendix A 2000 Demographic Maps
US 41 Latent Transit Demand Study

Figure A-1
Population Density

- US 41 Corridor
- Persons per Square Mile:
  - 0 - 800
  - 800 - 1,900
  - 1,900 - 3,000
  - 3,000 - 4,500
  - 4,500 - 1,600
  - 1,600 - 15,340

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Figure A-2
Worker Density

- US 41 Corridor

Workers per Square Mile:
- 0 - 250
- 250 - 500
- 500 - 1,000
- 1,000 - 1,600
- 1,600 - 2,500
- 2,500 - 5,525

Renaissance Planning Group
Figure A-3
Percent of Workers Working Outside County of Residence

- US 41 Corridor

Percent of Workers
- Below Average
- Average
- Above Average

Manatee Average - 23.62%
Sarasota Average - 12.82%
Figure A-4
Percent of Families with Income Below Poverty Level

US 41 Corridor
Percent of Families
0%
0% - 5%
5% - 9%
9% - 15%
15% - 35%
35% - 50%

Renaissance Planning Group
Figure A-5  
Percent of Households with Zero Vehicles Available

US 41 Corridor  
Percent of Households  
- 0%  
- 0% - 3%  
- 3% - 6%  
- 6% - 10%  
- 10% - 20%  
- 20% - 60%  

Renaissance Planning Group
Figure A-6
Percent of Workers Using Public Transportation with Travel Time Greater than 30 Minutes

US 41 Corridor

Percent of Workers
- 0%
- 0% - 1.5%
- 1.5% - 2.5%
- 2.5% - 4.0%
- 4.0% - 7.5%
- 7.5% - 13.0%

Renaissance Planning Group
Figure A-7
Percent of Workers Not Using Public Transportation with Travel Time Greater than 30 Minutes
Appendix B 2008 Study Area Population
<table>
<thead>
<tr>
<th>CENSUS BLOCK GROUP</th>
<th>COUNTY</th>
<th>2000 POPULATION</th>
<th>2008 POPULATION</th>
<th>PERCENT OF TOTAL</th>
<th>INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>120810001011</td>
<td>Manatee</td>
<td>736</td>
<td>862</td>
<td>2.05%</td>
<td>126</td>
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<td>Manatee</td>
<td>570</td>
<td>668</td>
<td>1.59%</td>
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<tr>
<td>120810001031</td>
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<td>658</td>
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<td>414</td>
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<td>209</td>
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<td>CENSUS BLOCK GROUP</td>
<td>COUNTY</td>
<td>2000 POPULATION</td>
<td>2008 POPULATION</td>
<td>PERCENT OF TOTAL</td>
<td>INCREASE</td>
</tr>
<tr>
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<td>165</td>
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<td>Manatee</td>
<td>590</td>
<td>691</td>
<td>1.64%</td>
<td>101</td>
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<tr>
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<td>466</td>
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<td>Manatee</td>
<td>794</td>
<td>930</td>
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<td>878</td>
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<td>129</td>
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<tr>
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<td>531</td>
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<td>53</td>
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<td>0.01%</td>
<td>0</td>
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<tr>
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<td>4</td>
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<td>1</td>
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<td>444</td>
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<td>187</td>
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<td>23</td>
<td>0.06%</td>
<td>3</td>
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<tr>
<td>CENSUS BLOCK GROUP</td>
<td>COUNTY</td>
<td>2000 POPULATION</td>
<td>2008 POPULATION</td>
<td>PERCENT OF TOTAL</td>
<td>INCREASE</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
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<td>-----------------</td>
<td>------------------</td>
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<tr>
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<td>1</td>
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<td>508</td>
<td>595</td>
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<td>87</td>
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<tr>
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<td>1.67%</td>
<td>103</td>
</tr>
<tr>
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<td>Sarasota</td>
<td>241</td>
<td>282</td>
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<td>41</td>
</tr>
<tr>
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<td>19</td>
<td>22</td>
<td>0.05%</td>
<td>3</td>
</tr>
<tr>
<td>121150005021</td>
<td>Sarasota</td>
<td>245</td>
<td>287</td>
<td>0.68%</td>
<td>42</td>
</tr>
<tr>
<td>121150005023</td>
<td>Sarasota</td>
<td>726</td>
<td>851</td>
<td>2.02%</td>
<td>125</td>
</tr>
<tr>
<td>121150006011</td>
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<td>266</td>
<td>312</td>
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<td>46</td>
</tr>
<tr>
<td>121150006012</td>
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<td>403</td>
<td>472</td>
<td>1.12%</td>
<td>69</td>
</tr>
<tr>
<td>121150006021</td>
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<td>411</td>
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<td>71</td>
</tr>
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<td>121150006022</td>
<td>Sarasota</td>
<td>480</td>
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</tr>
<tr>
<td>121150009001</td>
<td>Sarasota</td>
<td>3</td>
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<td>0.01%</td>
<td>1</td>
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<tr>
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<td>71</td>
<td>83</td>
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<td>12</td>
</tr>
<tr>
<td>121150009002</td>
<td>Sarasota</td>
<td>128</td>
<td>150</td>
<td>0.36%</td>
<td>22</td>
</tr>
<tr>
<td>CENSUS BLOCK GROUP</td>
<td>COUNTY</td>
<td>2000 POPULATION</td>
<td>2008 POPULATION</td>
<td>PERCENT OF TOTAL</td>
<td>INCREASE</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>121150010001</td>
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<td>582</td>
<td>682</td>
<td>1.62%</td>
<td>100</td>
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<tr>
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<td>573</td>
<td>1.36%</td>
<td>84</td>
</tr>
<tr>
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<td>Sarasota</td>
<td>447</td>
<td>524</td>
<td>1.24%</td>
<td>77</td>
</tr>
<tr>
<td>121150018012</td>
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<td>237</td>
<td>278</td>
<td>0.66%</td>
<td>41</td>
</tr>
<tr>
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<td>Sarasota</td>
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<td>951</td>
<td>2.26%</td>
<td>139</td>
</tr>
<tr>
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<td>444</td>
<td>520</td>
<td>1.24%</td>
<td>76</td>
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<td>127</td>
</tr>
<tr>
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<td>844</td>
<td>2.00%</td>
<td>124</td>
</tr>
<tr>
<td>121150020032</td>
<td>Sarasota</td>
<td>4</td>
<td>5</td>
<td>0.01%</td>
<td>1</td>
</tr>
<tr>
<td>121150020033</td>
<td>Sarasota</td>
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<td>333</td>
<td>0.79%</td>
<td>49</td>
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<tr>
<td>121150020041</td>
<td>Sarasota</td>
<td>464</td>
<td>544</td>
<td>1.29%</td>
<td>80</td>
</tr>
<tr>
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<td>428</td>
<td>501</td>
<td>1.19%</td>
<td>73</td>
</tr>
<tr>
<td>121150020043</td>
<td>Sarasota</td>
<td>883</td>
<td>1,035</td>
<td>2.46%</td>
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</tr>
<tr>
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<td>489</td>
<td>1.16%</td>
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<tr>
<td>121150020052</td>
<td>Sarasota</td>
<td>347</td>
<td>407</td>
<td>0.97%</td>
<td>60</td>
</tr>
<tr>
<td>121150020053</td>
<td>Sarasota</td>
<td>52</td>
<td>61</td>
<td>0.14%</td>
<td>9</td>
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<tr>
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<td>156</td>
<td>183</td>
<td>0.43%</td>
<td>27</td>
</tr>
<tr>
<td>121150020062</td>
<td>Sarasota</td>
<td>0</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
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<td>Sarasota</td>
<td>288</td>
<td>337</td>
<td>0.80%</td>
<td>49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>35,947</td>
<td>42,117</td>
<td>100%</td>
<td>6,171</td>
</tr>
</tbody>
</table>
Appendix C Surveys
Residential Mail Out Survey
### Section A: Household Information

1) What kind of home do you live in? (choose one)
- Single-Family Home
- Mobile Home
- Apartment / Condo
- Duplex
- Other: ____________

2) How many people live in your household?
- Number of Adults ____________
- Number of Children ____________

3) What is your current working status? (check one)
- work full-time
- work part-time
- work at home
- retired
- currently unemployed

4) How many autos are owned by the members of your household?
- zero
- one
- two
- three or more

5) What is the total annual income of your household?
- less than $25,000 per year
- $25,000 - $50,000 per year
- $50,000 - $75,000 per year
- $75,000 - $100,000 per year
- more than $100,000 per year

### Section B: Regular Trip Characteristics

6a) What type of trip do you make most often?
- Work
- Shopping
- Visit friend / relative
- Visit doctor, medical center

6b) What time of day do you generally make this type of trip (Check all that apply)
- Before 6 AM
- Noon - 3 PM
- 3 PM - 4 PM
- 4 PM - 5 PM
- 5 PM - 6 PM
- After 6 PM

6c) Which form of transportation do you use for this type of trip?
- auto
- carpool / vanpool
- taxi
- bicycle / walk
- transit

7) Using the map on the back of this page, please indicate the zones where your trip begins and ends.
- Begins: ____________
- Ends: ____________

8) Have you ever used transit in Sarasota or Manatee…

9) How would you rate the following aspects of the transit service

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>NA</td>
</tr>
</tbody>
</table>

### Hours of operation
- Buses arriving on-time
- Areas served by transit

### Section C: Transit Enhancement Scenarios

Now please tell us the likelihood of making the trip you described in Section B by transit assuming the following scenarios. Please use the following scale for the remaining questions.

<table>
<thead>
<tr>
<th>No</th>
<th>Maybe</th>
<th>50/50</th>
<th>Probably</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

10) The bus travels as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 15 minutes, and...

- You don't have to make a transfer.
- You have to wait 15 minutes to make a transfer.
- You have to wait 30 minutes to make a transfer.

11) The bus travels as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 30 minutes, and...

- You don't have to make a transfer.
- You have to wait 15 minutes to make a transfer.
- You have to wait 30 minutes to make a transfer.

12) Would you be more likely to use transit if the service hours were extended beyond the current operating hours of 6AM to 7PM.
Section A: Household Information

1) What kind of home do you live in? (choose one)
   - Single-Family Home
   - Mobile Home
   - Apartment / Condo
   - Duplex
   - Other:_________________

2) What are the characteristics of your household?
   - Number of Adults ____________
   - Number of Children ____________

3) What is your current working status? (check one)
   - work full-time
   - work part-time
   - work at home
   - retired
   - currently unemployed

4) How many autos are owned by the members of your household?
   - zero
   - one
   - two
   - three or more

5) What is the total annual income of your household?
   - less than $25,000 per year
   - $25,000 - $50,000 per year
   - $50,000 - $75,000 per year
   - $75,000 - $100,000 per year
   - more than $100,000 per year

Section B: Regular Trip Characteristics

6a) What type of trip do you make most often?
   - Work
   - Shopping
   - Visit friend / relative
   - Visit doctor, medical center
   - Other

6b) What time of day do you generally make this type of trip?
   (Check all that apply)
   - Before 6 AM
   - 6 AM - 7 AM
   - 7 AM - 8 AM
   - 8 AM - 9 AM
   - Noon - 3 PM
   - Noon - 3 PM
   - 3 PM - 4 PM
   - 4 PM - 5 PM
   - 5 PM - 6 PM
   - After 6 PM

6c) Which form of transportation do you use for this type of trip?
   - auto
   - carpool / vanpool
   - taxi
   - bicycle / walk
   - transit

7) Using the map on the back of this page, please indicate the zones where your trip begins and ends.
   Begins:_________________ Ends:_________________

8) Have you ever used transit in Sarasota or Manatee?
   - yes
   - no

9) How would you rate the following aspects of the transit service
   (Excellent to Poor)
   - Hours of operation
   - Time spent waiting to transfer
   - Buses arriving on-time
   - Areas served by transit

Section C: Transit Enhancement Scenarios

Now please tell us the likelihood of making the trip described in Section B by transit assuming the following scenarios. Please use the following scale for the remaining questions.

No 1 2 3 4 5 Yes

10) The bus travels half as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 15 minutes, and...
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

11) The bus travels half as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 30 minutes, and...
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

12) Would you be more likely to use transit if the service hours were extended beyond the current operating hours of 6AM to 7PM?
   - 1
   - 2
   - 3
   - 4
   - 5

US 41 Latent Demand Study
Final Report
Intercept Survey
Section A: Household Information

1) What kind of home do you live in?
- Single-Family Home
- Mobile Home
- Apartment / Condo
- Duplex / Condo
- Other: ______________________

2) What are the characteristics of your household?
- 1 adult no children
- 1 adult with children
- 2 adults no children
- 2 adults with children
- 3+ adults no children
- 3+ adults with children

3) What is your current working status?
- work full-time
- work part-time
- work at home
- retired
- currently unemployed

4) How many autos are owned by the members of this household?
- zero
- one
- two
- three or more

5) What is the total annual income of the household?
- less than $25,000 per year
- $25,000 - $50,000 per year
- $50,000 - $75,000 per year
- $75,000 - $100,000 per year
- more than $100,000 per year

Section B: Regular Trip Characteristics

6) What type of trip do you make most often?
- Work
- Shopping
- Visit friend / relative
- Visit doctor, medical center

7) Which form of transportation do you use for this trip?
- auto
- carpool / vanpool
- taxi
- bicycle / walk
- transit

8) What time of day do you generally make this trip?
- Before 6 AM
- 6 AM - 7 AM
- 7 AM - 8 AM
- 8 AM - 9 AM
- 9 AM - Noon

9) What are the zones where you trip begins and ends? (see enclosed map).

   Begins: ________________________ Ends: ________________________

10) Have you ever used transit in Sarasota or Manatee…
    - for this trip? _________ (yes/no)
    - for any trip? _________ (yes/no)

11) How would you rate the following aspects of the transit service:
    - Hours of operation
    - Time spent waiting to transfer
    - Buses arriving on-time
    - Areas served by transit

(1) (2) (3)

Section C: Transit Enhancement Scenarios

Now please tell us the likelihood of making the trip you described in Section B by transit if it has certain service characteristics. Please use the following scale for the remaining questions.

<table>
<thead>
<tr>
<th>No</th>
<th>Maybe</th>
<th>50/50</th>
<th>Probably</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

12) The bus travels as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 15 minutes and…
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

13) The bus travels as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 30 minutes and…
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

14) Would you be more likely to use transit if the service hours were extended beyond the current operating hours of 6AM to 7PM

   ________________________

(1) (2) (3)
Hotel Survey
Please help the Sarasota-Manatee MPO determine the need for public transportation enhancements in the US 41 corridor. Your input to this survey will assist us in evaluating the demand for public transportation use by visitors and hotel guests along the US 41 corridor.

Simply complete the survey and drop in any mailbox. Thank you for your help and participation.

1) How long was your stay?
   - 1 night
   - less than one week
   - one week or longer

2) How did you originally arrive at the hotel?
   - Taxi
   - charter bus
   - drove locally
   - drove out of county
   - drove out of state
   - transit

3) Please indicate the reason for your stay
   - vacation
   - driving thru
   - business
   - visiting friends
   - recreation
   - Other __________________

4) Did you use public transportation during your stay
   - yes
   - no

5) Did you fly into the Sarasota Bradenton Airport?
   - yes
   - no

How likely would you have been to use transit during your stay assuming the following transit scenarios

<table>
<thead>
<tr>
<th>No</th>
<th>Maybe</th>
<th>50/50</th>
<th>Probably</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

6) The bus travels as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 15 minutes, and...
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

7) The bus travels half as fast as cars on US 41, the maximum time you have to wait for a bus to arrive at the stop is 30 minutes, and...
   - ...You don't have to make a transfer.
   - ...You have to wait 15 minutes to make a transfer.
   - ...You have to wait 30 minutes to make a transfer.

8) Would you be more likely to use transit if the service hours were extended beyond the current operating hours of 6AM to 7PM
On Board Survey
In an effort to enhance the transit service that is being provided in the US 41 corridor, SCAT and MCAT, along with the MPO are asking for your help. Please help us serve you better by completing this survey. Thank You!

Section A. Transit Usage Information

1. In the past 7 days, how many days have you ridden a SCAT or MCAT bus (including today)?
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7

2. What is the purpose of your trip today?
   - to/from work
   - shopping
   - medical
   - social/recreational
   - social service agency
   - other (specify) ________________

3. How many buses will you need to reach your destination?
   - one
   - two or more

4. Do you have other means of transportation available for making this trip besides riding the bus?
   - yes
   - no

5. Using the map on the back, please indicate the zones where this trip began and will end.
   Begin ___________ End ___________

6. How long will it take you to reach your destination including any time spent waiting for the bus?
   _______________

7. How far did you travel today to get on the bus?
   - < 1/8 mile
   - 1/8 - 1/4 mile
   - 1/4 - 1/2 mile
   - 1/2 - 1 mile
   - 1 mile or more

8. How did you arrive at the bus stop today?
   - walk
   - bicycle
   - car - drop off
   - car - park n ride

Section B. Demographic Information

9. What is your current work status?
   - full-time
   - part time
   - work at home
   - retired
   - currently not working

10. Including yourself, please indicate the number of people living in your household.
    _______ Adults _________ Children

11. How many automobiles are owned by the people living in your house?
    - 0
    - 1
    - 2
    - 3 or more

12. Which of the following best describes your household?
    - single-family home
    - apartment / condo
    - Duplex
    - Mobile Home
    - other (specify) ________________

13. Which best describes your annual household income?
    - < $25,000
    - $25,000 - $50,000
    - $50,000 - $75,000
    - $75,000 - $100,000
    - > $100,000