A recent study by CUTR for the Florida Department of Education (FDOE) indicates that a large number of motorists have limited understanding of the laws governing passing of school buses that are stopped to load and unload passengers. Results of a survey conducted in 1996 indicated that approximately 10,600 motorists could be expected to illegally pass stopped school buses in Florida during a typical school day, or about 1.9 million illegal passes during a typical school year. This alarming number raises several broad and important issues about motorists in Florida. First, how well do they understand school bus signalizations and traffic signage, and second, how well do they understand the state’s traffic laws? Clearly, without thorough understanding, the potential for accidents is greatly increased and may ultimately result in injuries or death to school children.

In 1995, FDOE began an intensive effort to reduce the number of motorists illegally passing stopped school buses in Florida’s 67 school districts. As a first step, CUTR completed the 1996 survey to determine the number of illegal passes of stopped school buses that could be expected to occur during a typical school day. The current study was conducted to determine comprehension of the school bus stop law and to make recommendations for remedying associated problems.

**Measuring Motorist Comprehension**
To gain a better understanding of motorists’
knowledge of Florida's law and of school bus signalizations, the study was devised to answer the following two questions:

- Do motorists in Florida understand their responsibilities as defined in Section 316.172, F.S. (the “school bus stop law”)?
- Do motorists in Florida comprehend the meaning of the various signalizations used on school buses to communicate to them that a school bus is either coming to a stop or is stopped for the express purpose of loading or unloading children?

To answer these two questions, a simple, one-page, 18-question survey (in both English and Spanish) was developed. Respondents were asked to indicate whether statements about driving scenarios involving school buses displaying different types of signalization and stopping on various road configurations were “true” or “false” (see box). Other questions inquired about the respondents’ demographic and socio-economic traits, such as age, gender, and ethnic heritage, as well as aspects of their travel behavior, such as the number of miles driven per year and the number of school buses encountered during a normal day of travel.

### Results

Based on the sample data, the study found significant confusion on the part of respondents regarding their driving responsibilities related to the school bus stop law, as well as significant confusion about school bus signalizations. The amount of respondent confusion ranged from a low of 14 percent for scenario 1 to a high of 91 percent for scenario 5.

The results indicate that some driving situations involving whether or not to stop for school buses present more of a problem for respondents than other situations. Drivers indicated the least amount of confusion in scenario 1, the most basic situation drivers are likely to encounter (a two-lane roadway). Even so, approximately 14 percent of the respondents gave an incorrect response.

Alarmingly, this scenario represents the highest incidence of illegal passes, as documented by CUTR’s illegal passing study. This finding suggests that, while many motorists clearly do not understand
the law as it applies to this situation, many more motorists are, in fact, intentionally violating the law.

Survey results indicated that scenario 5 (“When a school bus stops to load children, all vehicles that are required to stop must remain stopped until all of the children have boarded the school bus”) evoked the most confusion by respondents in the sample. The Florida Driver’s Handbook states that, “[Drivers] must remain stopped until all children are clear of the roadway and the bus signal has been withdrawn” [emphasis added]. More than 90 percent of respondents responded incorrectly. (It should be noted, however, that this high percentage may have been caused by respondents misinterpreting the question’s intent. Specifically, the wording of this question may have implied that the bus signals were withdrawn simultaneously with the last student boarding the school bus. Therefore, some caution is urged when interpreting the results for this question.)

Other scenarios, particularly those related to multi-lane roadways, also evoked significant confusion on the part of respondents. The Florida Driver’s Handbook states, “If the highway is divided by a raised barrier or an unpaved median at least five feet wide, you do not have to stop if you are moving in the opposite direction of the [school] bus. Painted lines or pavement markings are not considered to be barriers.” Based on the responses, about 45 percent of the respondents displayed confusion about stopping in situations where a school bus traveling in the opposite direction is stopped on a multi-lane roadway with painted pavement markings indicating a two-way center left-turn lane.

Nearly 18 percent of the respondents indicated similar confusion about stopping for school buses on multi-lane roadways separated by some type of raised barrier, and nearly 40 percent indicated confusion related to multi-lane roadways separated by unpaved medians. Based on the sample data, motorists are clearly uncertain when to stop for school buses on multi-lane roadways.

A Need for Education and Enforcement

The results suggest that the knowledge of drivers in Florida regarding their responsibilities as defined in the school bus stop law is significantly lacking. Clearly, a key direction for improving driver knowledge of the school bus stop law and the meaning of the various school bus signalizations is driver education. Driver education about the school bus stop law can take many forms, including airing Public Service Announcements (PSAs) and placing information in automobile license tag renewal notices and rental car contract signoffs and on billboards.

The study also recommends that additional questions on stopping for school buses be added to driver license examinations and that the period of time between required driver license renewals (currently 4 years) for non-conviction-free motorists be reduced.

Another key avenue for improving driver knowledge of the school bus law is through enforcement. Efforts should be made to amend the school bus stop law to include tougher penalties for violation, such as increased points and fines and the possibility of performing community service and/or serving jail time for repeat offenders. In addition, steps should be taken to ensure that all drivers are made aware of the school bus stop law.

### Florida’s School Bus Stop Law
(from the 1996 Florida Driver’s Handbook)

On a two-way street or highway, all drivers moving in either direction must stop for a stopped school bus which is picking up or dropping off children. You must remain stopped until all children are clear of the roadway and the bus signal has been withdrawn.

If the highway is divided by a raised barrier or an unpaved median at least five feet wide, you do not have to stop if you are moving in the opposite direction of the bus. Painted lines or pavement markings are not considered to be barriers. If you are moving in the same direction as the bus, you must always stop—and not go forward until the bus signal has been withdrawn.
In an era of traffic snarls, the easiest commute is from your bedroom to your home office by way of computer rather than car. So, it is no surprise that telecommuting is rapidly becoming an accepted and effective alternative to the usual centrally-located workplace across the country. According to Telecommute America!, a public-private effort started in 1995 to promote the awareness and understanding of telecommuting and telework arrangements, three million more Americans telecommute from their homes to their place of business than did two years ago. Although the total numbers remain a small percentage of workers, growth in telecommuting is an important trend.

Telecommuting experts expect that high growth rates will continue in the near term. According to Jack Nilles, who coined the term “telecommuting” in the 1970s, America will have 20 million American teleworkers by 2000. The rest of the world will have at least 10 million teleworkers. By the year 2030, he forecasts nearly 65 million American teleworkers. The President’s Management Council’s National Telecommuting Initiative has set a goal to have 60,000 federal workers telecommuting by the end of fiscal year 1998. According to the General Services Administration, this level of telecommuting is expected to generate facility cost savings of $150 million annually.

Based on the combination of business resources, technological infrastructure, and quality of life factors, many believe that Florida is poised to experience much of this growth in telecommuting, resulting in reduced vehicle travel in the peak periods. In the April 1997 issue of PC World, 300 U.S. cities were ranked for favorability to working at home, including availability of telephone services and access to the Internet, courier services, copy centers, and more. Fifteen of Florida’s 20 urban areas were ranked in the top 25 percent of best cities for telecommuting.

Although the impacts and advantages of telecommuting are not widely understood among business leaders, government officials, and transportation professionals, research studies have indicated that telecommuting can result in the following:

- increased productivity (as much as 10 to 20 percent);
- savings in vehicle miles traveled (35 billion by the year 2002);
- lowered risk of injury and death (an estimated 815 traffic-related deaths and nearly 118,000 accidents per year by 2002).

In Tampa, CUTR is leading a volunteer effort to help inform transportation professionals, employers, and commuters about the benefits and impacts of telecommuting. Activities scheduled to take place during Telecommute America! Week (October 20-24, 1997) include holding a one-day Telecommuting Expo, developing a Virtual Telecommuting site on the World Wide Web, and conducting a workshop on the transportation and business impacts of telecommuting.

According to Gail Martin, executive director of the International Telework Association and project director for Telecommute America!, “We’re taking our message to the grassroots level in cities like Tampa and reaching out to local public and private employers to encourage their involvement in telecommuting.”

Many other organizations across the U.S. have sponsored Telecommute America! weeks, including the U.S. Department of Transportation, the U.S. General Services Administration, the U.S. Environmental Protection Agency, and AT&T. Similar grassroots activities are planned for Atlanta, Detroit, Phoenix, Salt Lake City, Seattle, and Washington, D.C.

For more information, contact Philip L. Winters, CUTR Senior Research Associate and TDM Program Director, at (813) 974-9811, winters@cutr.eng.usf.edu.
A recent CUTR study, conducted at the request of the Florida Legislature, reviewed the status and functions of 10 expressway authorities and 4 bridge authorities in Florida to determine their effectiveness. The study pointed out strong arguments both for and against the existence of expressway authorities.

Expressway authorities are formed in Florida either pursuant to the Florida Expressway Authority Act (Chapter 348, Part I of the Florida Statutes) or by special act of the Legislature. Most existing expressway authorities were created before Chapter 348, Part I, was enacted in 1990 and, therefore, are not subject to its provisions. In fact, the recently formed Dade County Expressway Authority is the only authority currently governed by Chapter 348, Part I. The significance of this is that the projects of expressways not governed by Part I of Chapter 348 are not required to be consistent with the local MPO plan or its priorities.

Expressway authorities usually build toll facilities, and a general disadvantage of these facilities is the high cost of collecting tolls. In its last year of operating toll facilities, the Jacksonville Transportation Authority in Florida estimated that the cost of collecting tolls amounted to 21 percent of its revenues, not including lost time and higher vehicle operating costs experienced by motorists due to congestion at toll barriers.

### Statistical Summary, Florida’s Expressway Authorities

<table>
<thead>
<tr>
<th>Authority</th>
<th>Status</th>
<th>FY97 Admin Budget ($)</th>
<th>Created</th>
<th>Roadway Miles Operated</th>
<th>1995 Toll Rev. ($) (000,000)</th>
<th>New Miles Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Co. Bridge Authority</td>
<td>inactive</td>
<td>0</td>
<td>1984</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Brevard Co. Expressway Authority</td>
<td>inactive</td>
<td>0</td>
<td>1972</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Broward Co. Expressway Authority</td>
<td>inactive</td>
<td>0</td>
<td>1983</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Dade Co. Expressway Authority</td>
<td>active</td>
<td>31&lt;sup&gt;4&lt;/sup&gt;</td>
<td>1994</td>
<td>18.7&lt;sup&gt;4&lt;/sup&gt;</td>
<td>5-10 plus misc. imprvmts</td>
<td></td>
</tr>
<tr>
<td>Escambia Co. Expressway Authority</td>
<td>emerging</td>
<td>0</td>
<td>n/a</td>
<td>none</td>
<td>none</td>
<td>10</td>
</tr>
<tr>
<td>Fort Walton Beach Bridge Authority</td>
<td>inactive</td>
<td>0</td>
<td>1990</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Jacksonville Transportation Authority</td>
<td>active</td>
<td>1,410,000&lt;sup&gt;5&lt;/sup&gt;</td>
<td>1955</td>
<td>none&lt;sup&gt;6&lt;/sup&gt;</td>
<td>18 plus misc. imprvmts</td>
<td></td>
</tr>
<tr>
<td>Mid-Bay Bridge Authority (Okaloosa Co.)</td>
<td>active</td>
<td>287,000</td>
<td>1986</td>
<td>4.1</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Orlando-Orange Co. Expressway Authority</td>
<td>active</td>
<td>2,382,520</td>
<td>1963</td>
<td>73.5</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Pasco Co. Expressway Authority</td>
<td>inactive</td>
<td>0</td>
<td>1973</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>St. Lucie Co. Expressway Authority</td>
<td>active</td>
<td>0</td>
<td>1983</td>
<td>none</td>
<td>3 (bridge)</td>
<td></td>
</tr>
<tr>
<td>Santa Rosa Bay Bridge Authority</td>
<td>active</td>
<td>0</td>
<td>1984</td>
<td>none</td>
<td>3 (bridge)</td>
<td></td>
</tr>
<tr>
<td>Seminole Co. Expressway Authority</td>
<td>active</td>
<td>296,908</td>
<td>1974</td>
<td>12&lt;sup&gt;7&lt;/sup&gt;</td>
<td>none</td>
<td>6&lt;sup&gt;7&lt;/sup&gt;</td>
</tr>
<tr>
<td>Tampa-Hillsborough Co. Expressway Authority</td>
<td>active</td>
<td>487,419</td>
<td>1963</td>
<td>13.6</td>
<td>3 plus misc. imprvmts</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Authority is considered active if it meets on a regular basis.

<sup>2</sup> Caution should be used if budgets are compared; the functions and types of expenditures included may vary among authorities.

<sup>3</sup> Budget is being developed; previous year was a start-up year.

<sup>4</sup> Negotiations are in process to turn over to the Authority 31 miles of expressways with 1995 toll revenues of $18.7 million.

<sup>5</sup> For engineering (highway) division only. The Authority also has a transit division.

<sup>6</sup> Projects are turned over to state or local government upon completion.

<sup>7</sup> The Authority undertakes initial design and engineering and then turns projects over to FDOT for bonding, construction, and operation.
On December 27, 1996, at 11:30 a.m., a fog-related incident occurred on the Sunshine Skyway Bridge in St. Petersburg, Florida, involving 54 vehicles traveling in both directions. This single event—although uncharacteristic of past fog-related crashes in the area—piqued local interest and concern about automatic fog detection and the need for motorist warning systems in Hillsborough and Pinellas counties.

In February 1997, CUTR was retained by the Florida Department of Transportation District VII Office to conduct a four-month investigation to determine the extent of unique and recurring patterns of fog and fog-related crashes in the Tampa Bay area and to recommend suitable countermeasures to detect and warn motorists of fog conditions.

Predicting Fog

Fog-related crashes, like crashes in general, are difficult to predict but may exhibit some tendencies associated with their occurrence. The National Transportation Safety Board (NTSB) recently concluded that fog-related crashes result generally because drivers do not maintain uniform reduced speeds during times of limited visibility.

A recently completed statewide fog crash evaluation study done by the Louisiana DOT concluded that, “[W]arning and guidance technologies [could be provided], but much of the responsibility for safety ultimately must still be placed on motorists to adjust their driving habits during times of reduced visibility.” Indeed, while 54 vehicles were involved in the December pileup, another 5,700 vehicles successfully crossed the bridge on that foggy morning.

Fog in the Tampa Bay Area

The Tampa Bay area typically has about 22 “heavy fog” days annually (when visibility is a quarter of a mile or less). Comparatively, the foggiest location in the U.S. is at Cape Disappointment, Washington, with 106 heavy fog days per year. Fog tends to form on clear, cool nights when moist air accumulates just above the ground or water. Light winds mix this shallow air to form condensation, which dissipates as the sun rises.

In the Tampa Bay area, this condition typically occurs between December and February, the area’s “fog season.” Still, fog prediction is difficult because of the variability in density, location, development and dissipation rates, and area of coverage at a given point in time. According to the National Weather Service in Ruskin, Florida, “There is no favorite location for fog to form in the Tampa Bay area.”

<table>
<thead>
<tr>
<th>Year</th>
<th>Total, all crashes</th>
<th>Fog-related crashes</th>
<th>% Fog-related crashes</th>
<th>Fog-related crash injuries</th>
<th>Fog-related crash fatalities</th>
<th>Total, all crashes</th>
<th>Fog-related crashes</th>
<th>% Fog-related crashes</th>
<th>Fog-related crash injuries</th>
<th>Fog-related crash fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>33,473</td>
<td>104</td>
<td>0.31</td>
<td>111</td>
<td>10</td>
<td>240,429</td>
<td>710</td>
<td>0.30</td>
<td>750</td>
<td>40</td>
</tr>
<tr>
<td>1988</td>
<td>34,896</td>
<td>97</td>
<td>0.28</td>
<td>85</td>
<td>1</td>
<td>256,543</td>
<td>1,033</td>
<td>0.40</td>
<td>1,069</td>
<td>42</td>
</tr>
<tr>
<td>1989</td>
<td>33,990</td>
<td>150</td>
<td>0.44</td>
<td>149</td>
<td>2</td>
<td>252,439</td>
<td>1,151</td>
<td>0.46</td>
<td>1,282</td>
<td>43</td>
</tr>
<tr>
<td>1990</td>
<td>31,087</td>
<td>138</td>
<td>0.44</td>
<td>122</td>
<td>3</td>
<td>216,245</td>
<td>851</td>
<td>0.39</td>
<td>1,025</td>
<td>31</td>
</tr>
<tr>
<td>1991</td>
<td>28,680</td>
<td>41</td>
<td>0.14</td>
<td>39</td>
<td>5</td>
<td>195,312</td>
<td>462</td>
<td>0.24</td>
<td>573</td>
<td>31</td>
</tr>
<tr>
<td>1992</td>
<td>27,643</td>
<td>127</td>
<td>0.46</td>
<td>130</td>
<td>2</td>
<td>196,767</td>
<td>682</td>
<td>0.35</td>
<td>785</td>
<td>29</td>
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<tr>
<td>1993</td>
<td>27,639</td>
<td>69</td>
<td>0.24</td>
<td>63</td>
<td>1</td>
<td>199,039</td>
<td>463</td>
<td>0.23</td>
<td>549</td>
<td>33</td>
</tr>
<tr>
<td>1994</td>
<td>27,230</td>
<td>61</td>
<td>0.22</td>
<td>64</td>
<td>2</td>
<td>206,183</td>
<td>485</td>
<td>0.24</td>
<td>586</td>
<td>31</td>
</tr>
<tr>
<td>1995</td>
<td>32,990</td>
<td>42</td>
<td>0.13</td>
<td>49</td>
<td>3</td>
<td>228,589</td>
<td>486</td>
<td>0.21</td>
<td>550</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>277,628</td>
<td>829</td>
<td>0.30</td>
<td>812</td>
<td>29</td>
<td>1,990,955</td>
<td>6,323</td>
<td>0.32</td>
<td>7,169</td>
<td>300</td>
</tr>
</tbody>
</table>

Source: Fla. Dept of Highway Safety and Motor Vehicles, Office of Management and Planning Services, Traffic Crash Database

Between 1987 and 1995, 829 fog-related crashes were reported in the Tampa Bay area out of a total of 6,323 across the state (approximately 0.3 percent). Also, during this same time period, fog-related fatalities have accounted for a little more than 1 percent of all crash fatalities in the state. Crash report sites have been scattered throughout the Tampa Bay area. Over the last decade, Hillsborough County has had a fog crash rate higher than the state average, while Pinellas County has been well below.
Among Florida’s 67 counties over this same period of time, Hillsborough County has never been ranked higher than 16th and Pinellas County has not ranked higher than 47th for fog-related crashes. For this same decade, Hillsborough County reported the greatest number of fog-related crashes (686), with Polk County reporting the second greatest number (444).

Detection and Warning Systems
Approximately 12 states have been formally engaged in detection and warning system evaluation related to fog, and several have invested $2-4 million for integrated visibility/weather and motorist warning systems. However, the benefits for deployment of such systems have not been documented. Even though a recurring recommendation related to all fog crash evaluations conducted by the states and National Transportation Safety Board is the development of driver awareness campaigns (to assure driver behavior is uniform in times of limited visibility), only California has followed through in this endeavor.

Because the Tampa Bay area has seasonal but scattered fog-prone and fog-crash-prone areas, the CUTR study determined that a major investment in detection and warning technology is not warranted at this time. Some minimal applications of low-level visibility enhancement and warning—such as raised pavement markers and/or variable speed signs—could be evaluated on an experimental basis for effectiveness in the most heavily-traveled corridors where fog crashes have occurred, as funding becomes available. However, a driver awareness program would be the most cost-effective countermeasure at the present time, given the aforementioned findings.

Recommendations
The study recommends that a very focused driver awareness campaign be initiated just prior to and during the area’s fog season of December-February. Given the characteristics of fog-related crashes that have occurred over the last decade, it appears that this awareness campaign should be aimed at:

• Hillsborough County residents;
• passenger car owners between the ages of 20-29;
• morning commuters; and
• drivers on local and county roads in rural locations.

Further, public service announcements, simple brochures describing driving tips in fog and fog formation characteristics, and enhanced traffic reporting on radio and television detailing current and historical fog information during the “fog season” would increase awareness. Slowing down or delaying trips altogether should be the most prominent type of message to the public during heavy fog conditions. A monitoring aspect of the driver awareness campaign should also be included to determine effectiveness and to trigger possible future detection/warning technology applications as they are needed.

“How to Drive in Fog
✔✔✔✔✔ If at all possible, consider delaying your trip until the fog clears.
✔✔✔✔✔ Check weather forecasts before and periodically during your trip.
✔✔✔✔✔ Be patient—slow down!
✔✔✔✔✔ Use low beam lights, never just parking or fog lights, and never use emergency flashers when the vehicle is in motion.
✔ Don’t tailgate; leave safe braking space.
✔ Avoid slamming on your brakes, except in an emergency.
✔ Minimize (or eliminate) lane changing, and be sure to signal your turns if you must change lanes.
✔ Turn off music/radio and open your windows to hear any trouble ahead.
✔ Avoid crossing traffic (try to avoid making left turns).
✔ Use your windshield wipers and defroster as necessary to maximize vision.
✔ If your vehicle stalls or is disabled, move it off the travelway, put your emergency flashers on, and move away from vehicle to avoid injury.

“CUTR’s evaluation report has provided valuable information on fog and fog-related crashes,” said John Temple, Director of Operations for FDOT District VII. “As a result of the study, the District will focus on driver awareness and education directed at driving under fog conditions.”

For further information, contact Mike Pietrzyk, CUTR’s ITS Program Director, at (813) 974-9815, pietrzyk@cutr.eng.usf.edu.

❖
Federal and State legislation requires each of Florida’s 25 Metropolitan Planning Organizations (MPOs) to develop a long range transportation plan (LRTP) and to update the plan every three to five years. An important part of each MPO’s plan is a needs assessment and the calculation of expected financial shortfalls. To aid in transportation planning for the state, the Florida Metropolitan Planning Organization Advisory Council asked CUTR to conduct a study to determine the cumulative, statewide financial shortfall of the 25 Florida MPO LRTPs.

To determine the overall financial shortfall, each MPO’s needs assessment (needs plan) costs—the costs associated with the transportation facilities and/or services that would be necessary to accommodate forecasted transportation demand through the horizon year of the LRTP—were compared with the total financial resources available to each MPO to implement its LRTP. Data used to develop the cost/revenue comparisons were taken directly from each MPO’s long-range plan, with input from MPO staffs.

Because the 25 MPOs report their cost and revenue information differently, several items had to be addressed before an estimate of the cumulative financial shortfall could be developed. Items that varied among plans include:

- the degree to which operations and maintenance (O/M) costs and revenues were included (some plans explicitly accounted for O/M costs and revenues, others simply stated that such costs would be funded with separate FDOT and/or county sources);
- the degree to which transit facilities and services were addressed, depending on the extent of available transit services;
- the base year of the revenue and cost information, which ranged from 1991 dollars to 1996 dollars; and
- the horizon year of the plans (the majority were based on 2020, the remainder on 2015).

The results of the analysis indicate an estimated cumulative shortfall of approximately $22.3 billion through year 2020, in 1995 dollars. Considering the inconsistencies in the plans and the treatment of those inconsistencies, it is likely that this estimate understates the overall financial shortfall. Given the portion of the roadway facilities found within the boundaries of the state’s 25 MPOs, it might be expected that approximately 75 percent of the roadway facilities in the state are covered by this financial shortfall estimate.

According to Howard Glassman, Executive Director of the Florida MPOAC, “The CUTR study is very valuable to Florida’s MPOs as...
we wrestle with how to meet our transportation needs into the next century.”

Based on the review, several suggestions were made to improve the quality of future cumulative shortfall estimates. Subsequent shortfall analyses could provide more valuable information if future LRTP updates were developed in anticipation of such a cumulative assessment. Accordingly, recommendations for future LRTP updates include:

- developing general guidelines for consistent reporting of financial information prior to development of future LRTPs;
- presenting more detailed breakdown of costs and revenues in future LRTPs; and
- presenting improvement cost and revenue information by responsible agency and facility type in future LRTPs.

For further information, contact CUTR Deputy Director Ed Mierzejewski, (813) 974-9797, mierzejje@cutr.eng.usf.edu.

Florida Commission for the Transportation Disadvantaged

New State TD Plan developed

The Florida Commission for the Transportation Disadvantaged (FCTD) recently published its new State of Florida 5 & 20 Year Transportation Disadvantaged Plan. The 1997 plan replaces the Florida Five-Year Transportation Disadvantaged Plan, which was published in 1992. CUTR provided technical assistance to the FCTD for the preparation of both plans.

For the first time, the 1997 TD plan includes a long-range element as well as the five-year plan required by Florida Statutes.

“We are pleased to be able to add a long-term strategic vision to the TD planning effort,” said Jo Ann Hutchinson, executive director of the Commission. “The 1992 TD Plan set forth goals and objectives for the delivery of community transportation services for the TD population. The 1997 TD Plan shows how far we have come in meeting those goals and sets a course for the future.”

The 1997 plan includes an overview of the Florida Coordinated Transportation System, a five-year report card for the Commission, a summary of a review conducted by the Office of Program Policy Analysis and Governmental Accountability (OPPAGA), and a restatement of the FCTD’s strategic vision for the short- and long-term. It also includes a new set of goals, objectives, and measures, which builds on those included in the 1992 TD Plan, and establishes an Action Plan for the next five years.

The Five-Year Plan calls for development and implementation of a statewide Advanced Public Transportation System (APTS)/

FCTD Five-Year Strategic Vision—“Our Commitment: Mobility”

Develop and field test a model public transportation system for persons who are transportation disadvantaged incorporating the following features:

- Statewide coordination of public transportation services using Advanced Public Transportation Systems (APTS), including Smart Traveler Technology, Smart Vehicle Technology, and Smart Intermodal Systems.
- Statewide coordination and consolidation of public transportation funding sources.
- A statewide information management system for tracking passenger eligibility determination.
- Integration of Smart Vehicle Technology on a statewide multimodal basis to improve vehicle and fleet planning, scheduling, and operations. This effort includes vehicle and ridership data collection, electronic fare media, and geographic information systems (GIS) applications.
- Development of a multimodal transportation network to optimize the transportation system as a whole, using Smart Intermodal Systems. This feature would be available in all areas of the state via electronic access.
Intelligent Transportation System (ITS) coordination strategy for community transportation coordinators and providers, implementation of an electronic information system to collect and analyze passenger data, exploration of initiatives to create a multimodal transportation system to respond to the needs of persons who are transportation disadvantaged, and refinement of ways to improve accountability for all TD expenditures.

For a copy of the 1997 TD Plan, contact the Florida Commission for the Transportation Disadvantaged, 605 Suwannee, MS-49, Tallahassee, FL 32399, (850) 488-6036. For more information on this project, contact CUTR Program Director Rosemary Mathias at (813) 974-9787, mathias@cutr.eng.usf.edu.

For targeted enforcement throughout the statewide law enforcement community to include periodic “enforcement blitzes” and other enforcement strategies.

Engineering Countermeasures

The study also recommends that the Florida DOT provide highway signage at areas around stops that advise local motorists that school buses make frequent stops in the area and that they are required, by law, to stop for school buses. In addition, the fine for violation of the law should also be shown on the signs to reinforce the message to motorists.

School districts also should evaluate their routes and the location of their school bus stops to determine if changes can be made to redirect routes/relocate school bus stops to roadways with lower incidences of illegal passes.

“This study proves that many people just don’t understand Florida’s law,” said Charlie Hood, Director of the School Transportation Management Section of the Florida Department of Education. “The study will help state and local agencies such as ours ‘get the word out’ to drivers on when they must stop for school buses. Improved safety for school children will be the result.”

The survey clearly indicates that the safety of children boarding and alighting school buses is being compromised by drivers who lack knowledge of the school bus stop law—or are ignoring it. Increased education, enforcement, and engineering countermeasures are the first steps in guaranteeing that safety.

For further information, contact CUTR Research Associate Michael Baltes at baltes@cutr.eng.usf.edu, (813) 974-3120.

Answers to “How Well Do You Know the Law?”

1. False—All vehicles must stop on a two-lane roadway.
2. False—All vehicles must stop because the roadway is not divided by an unpaved median at least five feet wide or a raised barrier.
3. True.
4. True.
5. False—All vehicles must remain stopped until all bus signals have been withdrawn.
6. False—Vehicles are required to stop only when red flashing lights are displayed. Yellow flashing lights indicate that the bus is slowing to make a stop.
EXPRESSWAYS

(Cont. from 4) Jacksonville’s previous toll facilities are now financed by a sales tax, and the authority’s cost of collection is negligible. Using a gas tax in place of tolls to finance roadways would have the same effect—that is, it would eliminate the high cost of toll collection. The increased use of new electronic toll collection technologies also could substantially reduce toll-collection cost.

In an area that needs additional limited-access highways, the best means of meeting at least some of that need in a timely manner, given current funding expectations, may well be to have an expressway authority construct toll facilities. However, the mere management of an existing toll facility may not be sufficient justification for the existence of an expressway authority. There often are other agencies more experienced in highway management. The strength and advantage of expressway authorities usually is in planning and building expressways, not in operating them.

As determined by the study, some of the reasons for having an expressway authority include the following:

- It is a single-purpose agency focused on a specific mission. Its ability to focus on a single major transportation project and not be distracted by competing interests or purposes allows it to accomplish projects that other state and local governmental entities often cannot.
- It usually is exempt from some state and federal design standards and processes, which may increase the feasibility, reduce the cost, and shorten the schedule of projects.
- It may be more sensitive to local issues than are state transportation agencies because all board members are local residents.
- When it is composed, in whole or in part, of members who are not elected officials, it may be easier to implement needed but controversial projects.
- It provides citizens an opportunity to serve their community, and it helps develop a base of civic and political leadership.

- When the authority is composed of more than one county, it may bring a regional perspective to bear on regional transportation needs that may be lacking in local governments. (There currently are no multi-county expressway authorities in Florida.)

On the other hand, some of the reasons not to have an expressway authority include the following:

- It contributes to the fragmentation of local government, making coordination and efficient allocation of resources more difficult, and making it more difficult for citizens to know “who’s in charge?”.
- When it is composed, in whole or in part, of members who are not elected officials, it is less accountable to local voters than an authority or local government composed entirely of elected officials. (The decision to appoint either non-elected members or elected officials usually reflects local preferences in the desire to insulate the development and management of toll facilities from politics versus the desire to maintain control and accountability.)
- It duplicates, to some extent, the efforts and costs of other governmental entities. This is especially true if the authority is managing a facility and is not actively involved in the planning and building of new facilities.
- A single-county authority may lack the regional perspective needed for expressway projects that affect surrounding counties. A state or regional transportation agency may be better able to assess and respond to regional needs.

“CUTR has provided the Legislature with a very useful review and analysis of this important component of the State’s transportation planning process,” said Florida State Senator James T. Hargrett, Jr., Senate Transportation Committee chair. “As we move forward this session to review that process and recommend improvements, the information will be most useful.”

For further information, contact CUTR Deputy Director F. Ron Jones at (813) 974-9785, frjones@cutr.eng.usf.edu.

**CORRECTION:** In our last issue, Gordon Linton was incorrectly identified as Administrator of the Federal Highway Administration. Mr. Linton is the Administrator of the Federal Transit Administration. We regret the error. —Ed.
BUILDING OPENING

[Cont. from 1] CUTR and in making the building a reality, including USF Engineering Dean Michael Kovac; CUTR Advisory Board Chair Jack Wilson; Florida Senator James T. Hargrett, Jr.; and Florida Transportation Commissioner David Kerr. The cutting of the ribbon was followed by an open house featuring exhibits, tours, and refreshments.

CUTR’s 80+ employees moved into the 26,000-square-foot building in late March and are enjoying a welcome change from the “modular units” occupied since early 1990. In addition to office space, the building includes graphics and GIS laboratory space, teleconferencing and distance learning facilities and equipment, and several meeting and seminar rooms, which already are being used extensively.

Cutting the ribbon at the official opening of the new CUTR building on July 29 are (l to r): Dr. Michael Kovac, Dean, USF College of Engineering; Jack Wilson, Chair, CUTR Advisory Board; Dr. Thomas Tighe, USF Provost; Gary Brosch, Director, CUTR; Brosch’s daughter Jessica; Dr. Kathy Stafford, USF Vice President for University Advancement; Mr. David Kerr, Florida Transportation Commission; and Florida Senator James T. Hargrett, Jr.

The new CUTR building, designed by Alfonso Architects of Tampa, is one of the first products of a new direction in the design of buildings for USF.