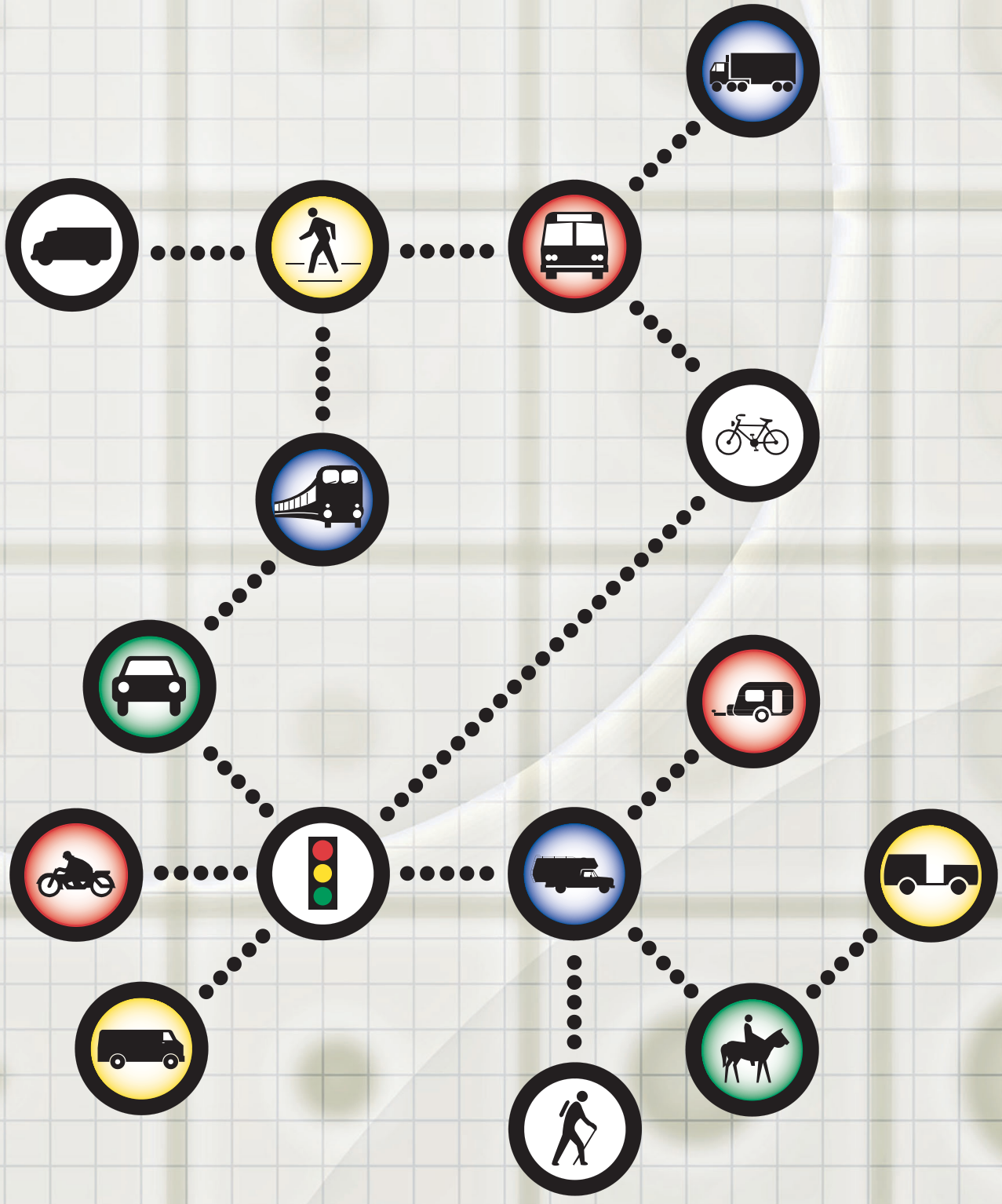
The 2002 Review of Florida's Twenty-Five Long Range Transportation Plans



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The 2002 Review of Florida's Twenty-Five Long Range Transportation Plans

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The Florida Department of Transportation

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EXECUTIVE SUMMARY

Federal and state transportation laws require that a long range transportation plan (LRTP) be developed in urban areas of greater than 50,000 people. The agency responsible for conducting the long range transportation planning process is the Metropolitan Planning Organization (MPO). The Florida Metropolitan Planning Organization Advisory Council (MPOAC) assists individual MPOs in carrying out the urbanized area transportation planning process by serving as the principal forum for collective policy discussion. In 1997, the MPOAC asked the Center for Urban Transportation Research (CUTR) at the University of South Florida to conduct a review the LRTPs of the state's twenty-five MPOs to gain a comprehensive understanding of the issues and concerns facing Florida's MPOs and the manner in which those issues and concerns were being assessed and documented in the long range transportation planning process. The study made several suggestions for improving the regional transportation planning process and documenting that process in the long range transportation plans, both in terms of technical approach and structure.

In 2000, CUTR was asked to conduct a comparative review of the updated long range transportation plans produced by the Florida MPOs located in clean air non-attainment areas. In general, that review identified a number of improvements in various areas compared to the 1997 LRTPs. However, many of the same issues and challenges identified in the 1997 study were still apparent.

In 2002, CUTR was asked to revaluate twenty-five MPO long range transportation plans. Each MPO had completed at least one update cycle since the initial review in 1997. Additionally, federal transportation legislation added a few new emphasis areas for LRTPs and provided slightly different guidance to direct the long range transportation planning process. CUTR was directed to pay particular attention to the methods used to establish project priorities, identify needs and move projects from needs plans to cost feasible plans.

In general, the quality of the most recent long range transportation plans improved significantly compared to those reviewed in 1997 or 2000. Overall, plan documents were more user-friendly and concise. They also contained less jargon and richer descriptions of issues and challenges. There appeared to be a somewhat more balanced reliance on modeling and a more obvious assessment of a wider range of planning considerations than roadway level-of-service deficiency. There were numerous examples of innovative public involvement efforts and improved regional and interagency coordination. There was an increase in the consideration of potential social and community impacts in the

decision-making process and thoughtful inclusion of community concerns into the decision-making process.

A variety of methods were used to select projects for the cost feasible plan with the most popular approach being the use of a weighted prioritization formula. Almost all the MPO plans incorporated the concepts of multimodalism and intermodalism, including such alternative strategies as intelligent transportation systems (ITS), corridor management, and transportation demand management (TDM). Even so, financial shortfalls between the costs of identified needs and reasonably available revenues remained a significant and widespread phenomenon. When added together, the statewide 20-year shortfall estimate is $37.7 billion (in year 2000 dollars) -- a 43% increase over the 1997 statewide shortfall estimate.

Although the 2002 review identified numerous improvements in long range transportation planning around the state, additional actions could be considered. Whereas some MPOs integrated a strong visioning process and/or principles of strategic planning into their long range transportation planning processes, many did not. Almost all MPOs included goals dealing with safety and economic competitiveness, but few systematically considered these issues. Most MPOs recognized the interaction between transportation and land use in their policy statements, but alternative land use scenarios were rarely considered. All MPOs identified goals, objectives and policies to guide their long range transportation planning process, but the final list of cost feasible projects was not always clearly linked to those goals, objectives and policies. There was no statewide consistency in how needs and expected revenues were identified, what the composition of these estimates should be or how this financial information was reported. Several MPOs staged the implementation of projects included in their cost feasible plan, but few identified a specific mechanism for project programming in their long range transportation plan.

Specific observations included the following:

- In general, plan documents are better organized, more user friendly and significantly more descriptive;
- Public involvement approaches improved dramatically throughout the state;
- Only a few MPOs integrated a strong visioning process or strategic planning principles into their long range transportation planning process;

- The final list of cost feasible projects was not always clearly linked to LRTP goals, objectives and policies;

- MPOs across the state employed various methods used to move projects from need plans to cost feasible plans;

- There was a somewhat more balanced reliance on transportation modeling and other considerations in plan development than was observed in previous plan reviews; and

- A large shortfall between revenues and needs plan costs remains a significant and widespread phenomenon.

Clear and significant improvements have been made in both the long range transportation planning processes around the state and in individual plan documents. The plan documents are better organized, easier to read and significantly more descriptive. Public involvement and regional coordination was dramatically improved and the process is less reliant on modeling and includes a wider range of planning considerations. While clearly improved, additional enhancements could still be made. A series of suggestions are offered to enhance the effectiveness and clarity of future long range transportation planning in the state. In light of the improvements already made, MPOs will clearly continue to increase the value of Florida's regional long range transportation planning practices.

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INTRODUCTION

The Transportation Equity Act for the 21st Century (TEA-21) and its predecessor, the Intermodal Surface Transportation Efficiency Act (ISTEA), strengthened local and regional authority in transportation planning. Much of this new responsibility fell to the Metropolitan Planning Organization (MPO), the federally designated agency responsible for overseeing transportation planning activities in metropolitan areas with populations of greater than 50,000 people.

Among other requirements, ISTEA and TEA-21 required MPOs to adopt long range transportation plans (LRTPs) that:

- were based on a 20-year timeframe,
- were cost feasible based on reasonably expected revenue sources over the life of the LRTP, and
- took into consideration several enumerated planning factors.

There was also an increased emphasis on involving the public in the decision-making process, adherence to clean air standards, system preservation and increased integration of transportation modes. In general, ISTEA and TEA-21 shifted the focus of transportation planning away from narrowly addressing traffic congestion through new highway construction to holistically resolving identified transportation needs through enhanced multimodal transportation alternatives and improved long range transportation decision-making.

However, while ISTEA and TEA-21 required the integration of several new considerations in the long range transportation planning process, little additional specific guidance was provided. The result has been a proliferation of approaches to LRTP development across the nation and state.

1997 REVIEW OF LONG RANGE TRANSPORTATION PLANS

In 1997, the Metropolitan Planning Organization Advisory Council (MPOAC) asked the Center for Urban Transportation Research (CUTR) to conduct a comparative review of the LRTPs of Florida's twenty-five MPOs. The overall research focus was to gain an understanding of the prevailing issues and challenges facing the different urbanized areas of the state and to identify the methods in which MPOs chose to address them.

Several notable issues were identified from the 1997 analysis of the twenty-five MPO LRTPs. One major conclusion was that an abundance of plans were driven

by transportation modeling with limited consideration of other issues. No standardized method for identifying and defining a future transportation need existed and there was widespread uncertainty related to the identification of future revenue, resulting in significant funding shortfalls around the state. The statewide 20-year funding shortfall, adjusted for varying base years and horizon years, was estimated to be $22.3 billion expressed in 1995 dollars (26.3 billion in Year 2000 dollars).

MPOs displayed different degrees of concern and attention to environmental and air quality issues. Many MPOs cited a general inability to interest the public in long range transportation planning issues. They attributed that, in part, to a lack of resources to undertake more ambitious public involvement efforts. There were varying levels of intergovernmental and interregional coordination identified around the state and a widespread lack of demonstrated systematic consideration of safety issues.

Many MPOs integrated Florida Intrastate Highway System (FIHS) needs into their LRTPs, but several found it difficult to address FIHS needs and local needs given the general lack of resources. Several MPOs focused on the relationship between transportation infrastructure development and economic competitiveness. Finally, there was a pervasive "sanitization" of plan documents, offering little insight into the transportation challenges faced in Florida's metropolitan areas and the manner in which the state's MPOs collectively addressed those challenges.

Based on that review, the following suggestions for the next generation of long range transportation plans were made:

- Incorporate discussion of current issues, a strong visioning process, and principles of strategic planning into the long range transportation plans;
- Recognize the interaction between transportation and land use, with alternative land use scenarios;
- Place greater emphasis on difficult policy trade-offs and less reliance on transportation planning models;
- Standardize reporting of certain performance measures;
- Systematically assess safety considerations in plan development;
- Systematically consider hurricane evacuation in development of long range transportation plans;

- Standardize the timing of plan updates throughout the metropolitan regions and the reporting of estimated costs and projected revenues; and

- Report financial information by responsible agency and facility type.

2000 REVIEW OF NON-ATTAINMENT LONG RANGE TRANSPORTATION PLANS

As required by TEA-21, any MPO in a region that does not attain the standards set forth by the federal Clean Air Act must update the LRTP every three years. Seven of Florida's MPOs were in non-attainment areas including the Broward County MPO, Hillsborough County MPO, Miami-Dade County MPO, Palm Beach County MPO, Pasco County MPO, Pinellas County MPO, and Spring Hill/Hernando County MPO. CUTR was again asked to review those seven updated MPO LRTPs in 2000 to determine if there were any changes in the issues or challenges faced by MPOs or the manner in which they address them. The plans were also reviewed to determine if any of the MPOs followed through on the suggestions made following the 1997 review.

In general, there were a number of improvements when comparing the 2000 updates to the 1997 LRTPs, while some of the same issues and challenges remained. The 2000 review findings are listed below.

- In general, the plan updates included much richer descriptions of problems and issues faced in the seven MPO areas. However, only a few MPOs incorporated any visioning techniques into the plan development process. More MPOs did incorporate strategic planning principles into their plan development practices, but this was predominately limited to the testing of widely different transportation alternatives.

- There was limited recognition of the interaction between transportation and land use and no consideration of alternative land use scenarios.

- By and large the MPOs placed greater emphasis on difficult policy trade-offs and while there was somewhat less reliance on transportation planning models, the dominant factor driving project selection remained roadway congestion as predicted by transportation models.

- The MPOs started reporting certain standard performance measures, but few undertook a systematic assessment of safety considerations or systematically considered hurricane evacuation.

- No significant steps were taken to standardize the timing of plan updates as

TEA-21 requires non-attainment areas to update their LRTPs on a different cycle than MPOs in attainment areas. While no effort was made to standardize reporting of estimated costs and projected revenues, most of the seven MPOs reported costs and revenues similarly because they generally used the same source of information, the FDOT.

- The driving force behind cost estimates remained the manner in which MPOs defined transportation needs. The standard modeling approach, in which needs are identified based primarily on congestion relief, tends to lead to a large number of needed highway widenings. In addition, MPOs tended to meet their transit "needs" with premium transit services (express bus and rail technologies). Premium transit services and highway widenings are expensive and result in a very expensive list of needed transportation projects.

  As was found in the 1997 review, the combination of insufficient and uncertain funding and broad definitions of transportation needs resulted in the universal identification of funding shortfalls. The 20-year funding shortfall for the seven LRTPs reviewed was estimated to be $14.3 billion, an increase of approximately 30 percent over the 1997 funding shortfall estimate for those same seven MPOs.

- MPOs started reporting financial information by responsible agency and facility type.

- Public involvement efforts varied greatly among MPOs. A few MPOs did not change their public involvement strategies (holding a few public meetings and one public hearing during the middle of the day at a government facility) from 1997 and the results (little attendance and low citizen input) reflected that. Other MPOs dramatically improved their public involvement strategies by increasing the frequency, timing and location of public meetings, sending newsletters devoted to plan update issues to a wide audience, developing interactive displays for placement at local activity centers, placing relevant plan information on a dedicated web site and other such techniques. These MPOs found that while it was still not a simple task to interest the average citizen in long range transportation planning issues, public participation and input did increase and issues that the community felt strongly about were identified that might otherwise have gone unnoticed.

- Improvement was seen in addressing air quality issues.

2002 REVIEW OF LONG RANGE TRANSPORTATION PLANS

In 2002, CUTR was once again asked to conduct a comparative review of the LRTPs of Florida's twenty-five MPOs. The timing was appropriate because each of the twenty-five MPOs had completed at least a minor update of the LRTPs originally reviewed in 1997. The scope of this review remained essentially the same as earlier efforts. Particular attention was to be paid to the methods used to establish project priorities, identify needs and move projects from needs plans to cost feasible plans.

Several years had passed since ISTEA altered long range transportation planning practice and TEA-21 had been adopted as the successor to ISTEA. The emphasis on long range decision-making first established in ISTEA was continued in TEA-21. While specific technical guidance remained limited, an effort was made in TEA-21 to streamline the long range planning focus by condensing the original sixteen planning factors enumerated in ISTEA into these seven broad planning considerations:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and for freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

Observations

In general, the quality of the most recent long range transportation plans improved significantly compared to those reviewed in 1997 or 2000. Overall, plan documents were more user-friendly and concise. They also contained less jargon and richer descriptions of issues and challenges. There appeared to be a somewhat more

balanced reliance on modeling and a more obvious assessment of a wider range of planning considerations than roadway level-of-service deficiency. There were numerous examples of innovative public involvement efforts and improved regional and interagency coordination. There was an increase in the consideration of potential social and community impacts in the decision-making process and thoughtful inclusion of community concerns into the decision-making process.

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The 2002 observations are based on reviews of long range transportation plans and supplemental information gathered through interviews with MPO staff. In some cases, additional plan documentation was incomplete or unavailable. Varying degrees of information were provided from technical reports and summary documents. A few MPOs chose to address particular subject areas in their short range planning process, instead of their long range planning process. Therefore, while this review of long range plans may indicate a lack of broad emphasis in a particular subject area, MPOs may be addressing that issue in their broader transportation planning practices.

Observations made during the 2002 review of Florida's twenty-five MPO long range transportation plans are presented below.

- **In general, plan documents are better organized, more user friendly and significantly more descriptive.**

  The majority of MPOs provide descriptive summaries of challenges and solutions in place of the pages of transportation model output and spreadsheet information that were prevalent in 1997. Many MPOs included user-friendly charts, graphs, maps and other visual aids to enhance the readability of the plan documents and make comprehension of the core material easier. Also, several MPOs produced hard copy and electronic summary documents highlighting the key information contained in the complete plan document, making the information more accessible and easier to comprehend. Many of these MPOs have made this information available on their web sites. A few of these documents have taken unique forms, like the on-line "Cliff's Notes" version of the Hillsborough County MPO 2025 Plan and the pull-out, full-color poster of the Gainesville 2020 Plan.

  The 1997 review of MPO plans concluded that plan documents around the state were "sanitized." The implication of this finding was that the plan documents at that time did not convey the challenges faced by MPOs during the long range transportation planning process. The state's MPOs, by and large, seem to have taken that observation to heart and have, in general, made an effort to enhance the descriptive nature of their plan documents. Policy rationales for decisions are often provided and obstacles and challenges faced and overcome are widely discussed in plan documents. Examples of this improvement range from a detailed description of the long life cycle of a roadway project in the Polk TPO 2025 Plan to a detailed explanation of local demographic issues and challenges in the Charlotte County/Punta Gorda MPO 2025 Plan to a brief but informative explanation in the Fort Walton Beach MPO Plan of why the MPO was not required to conduct a major update of their previous LRTP and what it meant to conduct only a minor update.

  While there has generally been a dramatic improvement in the descriptive nature of plan documents across the state, a few MPO plans replaced the overly technical material of the past with all but the most basic information and instead referred readers to technical reports numerous times in the plan document without providing a description of the material contained in the technical report. Although this practice does reduce the amount of material in the plan document, it does not make it more descriptive. Readers are not

informed of concerns, issues, challenges, assessment approaches and other decisions made during the long range transportation planning process.

- **Public involvement approaches improved dramatically throughout the state.**

  Public involvement efforts throughout the state were more creative, more varied and more effective than in previous long range plan development processes. Public involvement techniques included such standard techniques as public workshops, press releases and newsletters. More innovative techniques used around the state included: focus group research in Pensacola, a visual preference survey in Hillsborough County, simulation games in Charlotte County, a regional survey in Orlando in cooperation with corporate partners in the region, a random telephone poll in Hillsborough County, a visioning charette in Gainesville, multi-lingual public information materials in Miami-Dade County, area specific meetings in Tallahassee-Leon County, television programming in Sarasota and Manatee Counties and traveling displays and kiosks in Pinellas and Palm Beach Counties.

  Also, there was an increased effort made to reach out to traditionally underrepresented populations through targeted public involvement activities by several MPOs around the state. The application of these varied public involvement techniques resulted in higher levels of public participation than has previously been the case.

- **Although the systematic consideration of safety was somewhat improved, particularly related to hurricane evacuation, the practice was still not widespread.**

  Almost all MPOs addressed the issue of safety as a broad goal in their long range transportation plan, but only a few MPOs addressed issues of safety in a systematic manner. Generally, MPOs that systematically considered issues of safety did so through their prioritization process for selecting cost feasible plan projects. Most MPOs used hurricane evacuation and/or crash statistics as a criterion in their weighted prioritization formulas. Other MPOs simply identified their highest crash locations or most congested hurricane evacuation routes and included improvements to those facilities in their list of cost feasible projects.

  The Charlotte County-Punta Gorda MPO used a model developed by the National Hurricane Center to estimate storm surge during hurricanes of various intensities. This data was then matched against roadway characteristics of hurricane evacuation routes (such as drainage conditions during

flooding and traffic volume during an evacuation) to determine which were most likely to be significantly impacted during a hurricane. The results of this comparison were then used to identify needed improvements to address hurricane evacuation concerns.

The Polk TPO gave extra consideration to high crash locations by giving an advantage in the prioritization process to candidate roadway projects with a safety ratio of one or more. The safety ratio is a measure of how safe any given roadway segment is versus other similar roadway segments in the state. This ratio is calculated by dividing the actual crash rate (crashes per million vehicle miles traveled) by the critical crash rate (the average crash rate of similar roads throughout Florida).

- **Regional/interagency coordination has improved.**

  Plan documents from across the state reflected increased coordination with neighboring MPOs and with other stakeholder agencies. The Fort Walton Beach MPO sought out and received significant input from Eglin Air Force Base. The Brevard County MPO coordinated with the plans of the Kennedy Space Center and Florida Space Port. Several MPOs coordinated their long range transportation planning effort with the long range planning efforts of local universities.

  In a few cases, formalized coordination occurred with neighboring MPOs. The Treasure Coast MPOs (the Indian River County MPO, the Martin County MPO and the St. Lucie County MPO) coordinated their individual long range transportation planning activities. The West Central Florida Regional Coordination Process covers the Tampa Bay area and includes the Hillsborough County MPO, the Pinellas County MPO, the Pasco County MPO, the Spring Hill/Hernando County MPO, the Polk TPO and the Sarasota/Manatee MPO. These groups coordinated long range planning activities and developed a regional planning strategy and goals. Additionally, a single regional model (the Tampa Bay Regional Planning Model) covers the four MPOs that comprise the single Tampa Bay Transportation Management Area.

  Further to the east, the Central Florida MPO Alliance is a formalized effort to coordinate transportation planning activities between the Volusia County MPO, the Brevard County MPO, METROPLAN ORLANDO and Lake County (not yet included in an MPO area). This group has also coordinated their efforts to pursue funding for large projects of regional significance and establishes annual priorities as part of the program development process.

- **Almost all MPOs incorporated the concepts of intermodalism and multi-modalism into their long range transportation plans.**

  Almost all MPOs planned for multi-modal improvements with intermodal connectivity. For many MPOs, this was their first multi-modal long range transportation plan. Improvements included in plans across the state ranged from bike paths and sidewalks to multi-use trails, from light and heavy rail lines to bus rapid transit and from HOV lanes to express bus routes. The Hillsborough County MPO even developed a long range transportation demand management (TDM) plan. The Tallahassee/Leon County MPO conducted a two-tiered walkability/bikability analysis to target bicycle and pedestrian enhancements to areas that have a high potential for bicycle and pedestrian activity. Several MPOs now set aside flexible federal funds to be used for transit and other non-highway projects to be selected as part of the annual project prioritization process.

  However, few MPOs considered non-highway alternatives in place of highway capacity improvements. Rather, most MPOs considered non-highway improvements in addition to highway improvements. There were a few notable exceptions in both large and small MPOs. One large MPO example is the Broward County MPO. As matter of policy the Broward County MPO Board sought to minimize roadway widenings and increase transit service and connectivity in place of increased highway capacity. Highway and transit alternatives were considered simultaneously during alternatives testing. This approach resulted in significant spending on transit improvements relative to highway improvements.

  An example of a small MPO holistically considering highway and non-highway alternatives together is in Gainesville. The Gainesville MPO considered all modal alternatives together in support of their land use vision. The result was a project mix that included express bus service, new roadway corridors to connect existing roadway corridors and a lane reduction with enhanced pedestrian and bicycle facilities in yet another corridor. This approach provided a blueprint for a future transportation system that meets defined needs with an appropriate mix of modal facilities.

- **More consideration was given to social and community issues in the long range transportation planning process.**

  Considerations around the state included the preservation of the natural environment, the avoidance and mitigation of community impacts (cut-through traffic and division of a cohesive neighborhood, etc.), the level of community support, and the potential impact to community aesthetics, and

cultural and historic resources. Additionally, several MPOs considered the potential impact of projects, both individually and as a whole, on minority and low-income populations. In some cases, projects were specifically included in cost feasible plans in order to mitigate potential impacts as identified through consideration of potential social and community impacts. In other cases, projects were specifically excluded from cost feasible plans to avoid creating new impacts or compounding existing ones.

The most common mechanism for considering potential social and community impacts was to integrate them into the project prioritization process. For example, the Panama City MPO considered the level of community support as a qualitative factor for including candidate projects in the cost feasible plan. The first screen of the Polk TPO three-tier screening process was an assessment of potential significant negative impacts to the natural and human environment.

Other MPOs took different approaches to considering potential social and community impacts. The Miami-Dade County MPO established a Transportation Aesthetics Review Committee that evaluated candidate projects. In Panama City, projects were added to the cost feasible plan to address neighborhood cut-through traffic issues and to provide community gateways. The Spring Hill/Hernando County MPO mapped historic community locations for further consideration in the planning process. The Pinellas County MPO took into account municipal concerns over potential community impacts, particularly in a few communities near the US 19 corridor where roadway improvements were contemplated on parallel facilities that ran through downtown commercial districts.

Several MPOs attempted to consider the potential environmental justice (EJ) impacts of their plans. Most MPOs achieved this goal through the public involvement process by reaching out to traditionally underrepresented communities. Some also considered the potential EJ impacts of their plans by identifying the geographic boundaries of established minority and low-income communities relative to the proposed location of candidate projects. In some cases projects were identified for further review in later stages of project development. In other cases, projects were modified or dropped in order to mitigate potential EJ impacts.

- **Strong attention was paid by the MPOs to the seven broad TEA-21 planning considerations and to the identified needs of the Florida Intrastate Highway System (FIHS), but little attention to the goals of the 2020 Florida Transportation Plan (FTP).**

  Almost all MPOs enumerated the seven broad TEA-21 planning considerations in their long range transportation plans. The Lee County, Spring Hill/Hernando County and Hillsborough County MPO LRTPs each contained tables assessing how their individual plan goals, objectives and policies addressed the TEA-21 planning considerations. The Gainesville MPO described how each project included in the cost feasible satisfied the TEA-21 planning considerations.

  The majority of MPO plans addressed the identified needs of the FIHS. In some cases, FIHS projects were included in the cost feasible plan as a separate project category and not included in the project prioritization process. In other cases, FIHS improvements were given priority in the ranking process, but not excluded from the process.

  The 2020 FTP outlines the state's transportation goals and guiding principles. While there is no requirement that MPO long range plans consider the goals enumerated in the FTP, coordination between statewide and regional transportation efforts would be desirable. Only two of the State's twenty-five MPO long range transportation plans refer to the 2020 FTP. The Indian River County MPO describes how their plan advanced the goals of the 2020 FTP. The Volusia County MPO plan enumerates the FTP goals and describes how their long range transportation plan is consistent with those enumerated goals. However, many of the goals of the 2020 FTP are advanced by the goals, objectives and policies of the LRTPs because of the overlapping emphasis between the goals and guiding principles of the 2020 FTP and the planning considerations of TEA-21.

- **Only a few MPOs integrated a strong visioning process or strategic planning principles into their long range transportation planning process.**

  Visioning and strategic planning principles dictate the consideration of "what if" scenarios and the assessment of a plan to meet those various scenarios. Based on that definition, only a few of Florida's MPOs integrated a strong visioning process or otherwise employed strategic planning principles to guide the development of their long range transportation plan.

  The most notable example of a long range plan based on a strong visioning

process is in Gainesville. The Gainesville MPO decided to abandon the standard long range transportation planning process in which future travel conditions are assessed based on the projected distribution of population and employment according to future land use information contained in local comprehensive plans. Instead, Gainesville undertook an extensive land use visioning exercise in which four alternative land use scenarios were considered, with considerable community input and involvement, and narrowed to one land use vision for the region. Needs and Cost Feasible Plan projects were then selected and tested in support of that land use vision. The result is a plan driven by a vision of what the stakeholders of the region want their community to look like in the future and strives to provide the necessary mix of transportation facilities to support that vision.

The Tallahassee/Leon County MPO based their plan primarily on sub-area visioning efforts they refer to as the Central City and Southern Strategies. These strategies discourage continued growth to the north of the city center and refocus development activities in the central and southern portions of the metropolitan area. Policies have been developed to encourage this desired development pattern. The MPO took this policy direction into account when projecting and distributing future population and employment in the long range transportation planning process. The result was the refocusing of transportation infrastructure improvements in the LRTP to those areas of the region.

A similar sub-area visioning effort guided the long range transportation planning effort of the Polk County TPO. The TPO undertook an analysis of four separate sub-areas of the metropolitan area in which alternate population and employment forecasts were made. The separate area-specific needs analyses led to the appropriate identification of transportation improvements and strategies in those sub-areas. Additionally, corridor studies were conducted in two of the sub-areas to examine improvement alternatives for specific corridors.

Development of the Charlotte County/Punta Gorda MPO LRTP was guided by the Charlotte County Vision. The Charlotte County Vision was a collaborative visioning process conducted by Charlotte County, the City of Punta Gorda and the MPO and included the consideration of four alternative build-out scenarios. The MPO reported that the visioning effort resulted in billions of dollars saved in road and bridge improvements, tremendous reduction in emissions, and other public benefits.

The First Coast MPO strongly considered the goals and objectives of the future vision for the Jacksonville metropolitan area as in the Better Jackson-

ville Plan. Several projects were included in the cost feasible plan to support and advance Better Jacksonville Plan goals and objectives.

- **Although somewhat increased, there remains limited consideration of alternative land use scenarios.**

  The overwhelming majority of MPOs take land use as a given and make future population and employment distribution decisions based on the information contained in local comprehensive plans. There are a few exceptions. The Gainesville MPO, Tallahassee/Leon County MPO, Charlotte County/Punta Gorda MPO and the Polk County TPO each considered alternative land use scenarios based on visioning activities. In addition, the Tallahassee/Leon County MPO integrated the findings of the Blueprint 2000 Plan, a comprehensive visioning exercise that was conducted by an intergovernmental agency specifically created for the purpose of conducting and implementing the Blueprint 2000 Plan.

  An example of an MPO that considered alternative land use scenarios outside of a visioning process is the Pensacola MPO. The Pensacola MPO modified the distribution of future population away from Navarre Beach and Southeast Escambia County toward Northwest Escambia County to reflect a policy desire to shift future growth away from the coastline of Escambia County. This significantly changed identified transportation needs in the region and, in turn, yielded a final plan that included projects supportive of the desired population distribution.

  In another example, St. Lucie County and Martin County are currently conducting a combined study of alternative future land use scenarios. The results of this study may require reconsideration of the current MPO LRTPs and will certainly influence the ongoing long range transportation planning processes in both metropolitan areas.

- **Plan horizon years and timeframes are not standardized across the state.**

  Of the 25 MPO LRTPs in Florida, 15 are 2025 plans while the remaining 10 are 2020 plans. This reflects more than the federally mandated update cycle (every 3 years for non-attainment areas, every 5 years for the rest), as several areas on the attainment area cycle completed 2025 plans covering a timeframe of 25 years – 5 years longer than the standard LRTP. In addition, MPOs with the same horizon year (2020 or 2025) do not always cover the same time frame. Some MPOs have chosen to assess the timeframe between plan adoption and the planning horizon year (2002 through 2025 for

example). Other MPOs chose to assume that the five-year time period covered by the Transportation Improvement Program (TIP) did not need to be accounted for in long range planning. These plans cover only the remaining timeframe between the first year after the TIP timeframe and the planning horizon year (2007 through 2025 for example). As a result, the 25 LRTPs in the state cover timeframes between 15 and 25 years, making statewide comparisons of certain types of data (finances, population trends, etc.) problematic.

One example of where this inconsistency in timing complicates statewide comparisons is in population trends. Base year population projections in MPO plans across the state range from year 1990 figures to year 2000, with most falling in the middle. These base year population figures are then projected to the horizon year of the plan, 2020 or 2025 depending on the MPO. Because of the differences between the base years, the horizon years and the timeframe being covered, direct comparison of these population figures is complex, requiring a variety of assumptions to bring the figures into alignment.

- **The reporting of financial data continues to be a complex exercise that varies between MPOs.**

MPOs across the state report financial data in disparate ways. MPO financial data is expressed in a variety of base years, are projected to a variety of base years and cover a variety of timeframes. Additionally, MPOs across the state define the composition of financial data in a number of different ways.

For example, some MPOs calculate a needs plan and a cost feasible plan cost for each mode (highway, transit, bicycle, pedestrian, etc.) at each level (state and local) considered in the plan. Other MPOs only calculate needs plan costs for some modes while calculating cost feasible plan costs for all modes and present both as a total cost. A few MPOs did not distinguish between operating costs and capital costs, particularly as they relate to transit, in deriving a total plan cost. Still other MPOs simply report the expected revenue for a given mode as the expected cost. A few MPOs used unit costs to estimate project costs that differed from the unit costs used by other MPOs. While these variations may make sense in the local context and make the planning exercise more realistic, this lack of standardization makes statewide comparisons of financial data problematic.

- **The final list of cost feasible projects was not always clearly linked to the LRTP goals, objectives and policies.**

  Goals, objectives and polices (GOPs) are typically used to guide the long range planning process and the final selection of cost feasible projects. Collectively, GOPs appearing in plans around the state addressed a variety of issue areas including: safety, congestion, capacity, environmental protection, freight movement, multimodalism and intermodalism, economic vitality, energy efficiency, system efficiency and preservation, system connectivity, land development and growth, accessibility, mobility, coordination and more. Several MPOs developed measures of effectiveness (MOEs) based on their GOPs, presumably to measure the ability of projects to address plan goals. Examples of MOEs included in plans across the state include: total miles of transit service, percent of corridor miles served by transit, percent of corridors with volume to capacity ratios of 1.0, percent of congested lane miles, percent of corridor miles with bicycle lanes, total corridor miles with sidewalks, hurricane evacuation route lane miles, lane miles with historic significance, total crashes and fatalities, percent of congested roads with sidewalks and more. Many MPO plans included long lists of GOPs and associated MOEs.

  However, there was not always a clearly documented link between the final list of cost feasible projects and the original GOPs. Some LRTPs simply state that the list of cost feasible projects support the GOPs, but provide no supporting documentation to demonstrate this assertion. Several LRTPs contain a detailed list of MOEs, but include no documentation of the ability of final cost feasible plan projects to meet plan GOPs either through the application of MOEs or through some other descriptive mechanism. Even in some cases where a clearly defined mechanism was applied for the selection of cost feasible plan projects, a clear link back to all or some of the plan GOPs was not established. Two notable exceptions were the Panama City and the Gainesville MPO plans. Each project included in these final cost feasible plans was described in detail and an explanation of how each fulfilled the goals of the plans was provided.

- **The definition of transportation need varied across the state.**

  Some MPOs defined a set of needed transportation projects strictly on projected highway level of service deficiencies and projected transit ridership demands. Other MPOs refined their definition of needed transportation projects by considering policy, physical and environmental constraints, effectively reducing the number of needed projects. Other MPOs, specifically excluded projects considered to be unrealistic, too controversial or

overkill. For example, the Miami-Dade County MPO excluded what they referred to as "gold plated" transportation options where cheaper alternatives could be identified that still met the projected demand. The Panama City MPO plan also specifically stated that unrealistic projects were excluded from inclusion in the needs plan. The Gainesville MPO revised its land use vision to, in part, generate a more realistic set of needs plan projects. Another factor directly impacting the determination of transportation needs is the population projection in the metropolitan area. Higher population growth rates tend to lead to an increase in the projected travel demand, often resulting in more needed projects.

Therefore, MPOs that anticipated significantly larger population growth than other similarly sized MPOs tended to identify more transportation needs. As a result of these policy decisions and factors, MPOs of comparable size reported dramatically different shortfalls between their needs plan costs and reasonably available revenue, with some shortfalls being very large and others being relatively modest in size.

- **MPOs across the state employed various methods to move projects from needs plans to cost feasible plans.**

The methods used for selecting projects included in the cost feasible plan generally fell in one of three categories: the subjective policy driven approach, the deficiency assessment approach and the prioritization formula approach. The Miami-Dade County MPO used a subjective ranking approach in which all needs plan projects were assigned a score of between –10 and +10 based on their perceived ability to advance plan goals and objectives. The list of cost-feasible projects was based on that ranking, with some minor common sense modifications. The Panama City MPO also employed a subjective review of needs plan projects based on a variety of criteria. A few MPOs simply performed a level-of-service deficiency analysis using the standard transportation model and selected projects based on their ability to relieve future congestion.

The most popular approach was the use of weighted prioritization formulas. This approach assigns overall scores to each project included in the needs plan based on the project's ability to satisfy a set of individual quantitative and/or qualitative criteria. Each candidate project is assigned a score for each individual criterion. Then an overall project score is tabulated based on a formula that is generally weighted to reflect a given policy emphasis. Projects are then ranked by their total score and included in the cost feasible plan as projected revenues permit. A few MPOs use formulas with different criteria depending on the mode of the projects being considered. For

example, the Hillsborough County MPO employed 10 criteria in a weighted formula used to prioritize highway projects, 9 different criteria in a weighted formula to prioritize bicycle and trail projects, another 4 criteria in the sidewalk formula and yet another 5 criteria in the transit formula.

One of the most extensive prioritization methodologies was found in the Polk TPO LRTP. The Polk TPO employed a three-tier analysis of candidate projects. The first tier was a fatal flaw analysis in which projects with the potential to create significant negative environmental or community impacts were eliminated from the candidate project list. Those projects that passed the tier 1 screening were then evaluated under tier 2 and 3. The second tier gave weight to projects that were needed in the short-term, projects that were candidates for later phases of the project development cycle, and projects that contributed to system preservation. The third tier assessed projects relative to TEA-21 planning considerations. The specific criteria assigned points relative to a candidate project's perceived ability to relieve traffic congestion, improve freight/goods movement and economic competitiveness, improve community livability and not negatively impact neighborhoods and businesses, avoid impacts to the natural environment and address safety concerns.

- **There was a somewhat more balanced reliance on transportation modeling and other considerations in plan development than was observed in previous plan reviews.**

  Historically, identifying future roadway level-of-service (LOS) deficiencies and future roadway projects to improve those deficiencies has been the primary focus of long range transportation planning in Florida. These planning processes relied heavily and sometimes exclusively on the output of transportation models. Long range transportation plans were filled with model output and large portions of the plan were dedicated to descriptions of the modeling effort. ISTEA followed by TEA-21, shifted that focus on future roadway LOS deficiency to a variety of other factors as outlined in the seven TEA-21 planning considerations.

  As demonstrated by the long list of goals, objectives and policies in the State's current MPO plans, and the variety of prioritization methods and criteria employed, it is clear that MPOs are considering a number of factors in developing their long range transportation plans. While transportation modeling is still clearly an important tool in the long range transportation planning process, it no longer appears to be the primary driving force in the process in most cases. However, there were still a few examples where the roadway LOS deficiency analysis based on transportation model output

remained the overwhelming force behind cost feasible project selection.

- **Detailed consideration of economic competitiveness and/or freight movement was not widespread.**

  While most MPOs included the issue of economic competitiveness and/or freight and goods movement in plan goals and objectives, only a few MPOs considered these issues in any detailed or systematic fashion during plan development. The majority of MPOs that did consider these issues in a more concrete fashion typically did so through their project prioritization process. A few MPOs established freight and goods movement advisory boards.

  The Miami-Dade County MPO included projects in their cost feasible plan for the explicit purpose of improving freight movement to enhance economic competitiveness. An under-bay tunnel project was included in the cost feasible plan to enhance access to the Port of Miami. Extensive surface street improvements were also included in the cost feasible plan to enhance circulation in the Cargo City area, the intense cargo handling area near the Miami International Airport. The Brevard County MPO took into consideration the freight movement needs of the Kennedy Space Center and Florida Space Port.

  The Spring Hill/Hernando County MPO identified and mapped routes with heavy truck traffic, intermodal facility locations and freight movement in the county. Indian River County also identified and mapped intermodal facility locations and roadways that serve those facilities as well as heavy truck traffic roadways. This information was used to focus plan development in an effort to meet freight and goods movement needs in both MPO areas.

- **Corridor management and preservation was considered by a few MPOs in the development of their long range transportation plan.**

  A few MPOs addressed the issue of corridor management and preservation. The St. Lucie County MPO identified corridor preservation as one of the criteria used to prioritize needs plan projects for inclusion in the cost feasible plan. The Martin County MPO included a map identifying the right-of-way requirements of the long range transportation plan. The map identifies generalized roadway requirements, the future maximum number of through lanes, the roadway functional classification and constrained facilities. The Hillsborough County MPO plan included a plan objective to support the adoption of local right-of-way preservation policies and ordinances and included the preservation of land for future transportation needs as a

prioritization criterion for evaluating candidate projects. The Spring Hill/ Hernando County MPO plan also included a plan objective that encouraged the preservation of right-of-way sufficient to accommodate roadway, transit and other transportation modes.

The three Panhandle MPOs identified corridor management as an important element for the implementation of their plans. In February 2002, one-day corridor management workshops were held in each of the three MPO areas. The workshops, targeted at local planning, engineering and legal staff, focused on corridor management benefits, strategies and legal underpinnings. A brief overview presentation on corridor management was also provided for each of the three MPO Boards.

- **There was an increase in the application of Intelligent Transportation Systems (ITS) technology.**

  Several MPOs considered ITS in their long range planning efforts. A few MPOs, including METROPLAN ORLANDO and the Pinellas County MPO, established ITS subcommittees to ensure the consideration of ITS in the long range transportation planning process.

  One of the most popular ITS applications around the state was the installation of a computerized signal system. This will enhance operations on the existing transportation network and improve both system efficiency and safety. The Miami-Dade County MPO designated twelve priority ITS corridors in the metropolitan area. A variety of ITS treatments will be used in those corridors to ease congestion. The ITS projects are in place of wide-scale capacity projects.

  The Pasco County MPO has committed to set aside $1 million per year to fund future ITS projects in the County and has also committed to ITS improvements in the US 19 corridor. The First Coast MPO also set aside an annual allocation of funds for use on ITS projects to be selected during the annual project programming process.

  The Lee County MPO has committed to several ITS projects in the County and is currently developing an ITS plan that will then be integrated into the current long range transportation plan. They are also studying an incident management system for the bridges over the Caloosahatchee River bridges. The Pinellas County MPO describes a three-phase ITS improvement strategy in the long range transportation plan. The first phase focuses on north-south routes in the County. The second phase focuses on east-west routes and the third phase focuses on other priority corridors.

- **Few MPOs defined a specific mechanism for project programming in the long range transportation plan.**

  Several MPOs did identify a time frame for project implementation through the staging of their cost feasible plans into short-range (interim) and long range components. Staged plans were typically broken into two or three stages covering relatively equal time frames within the broader time frame of the overall plan document. In a few cases, the first stage included only projects that were already programmed in the then current Transportation Improvement Program (TIP). MPOs that staged their cost feasible plan indicated that they use the staging as a guide for prioritizing projects during the annual project programming process.

  The Martin County MPO identified specific criteria for annually prioritizing cost feasible plan projects for inclusion in the TIP. The ranking assigned to candidate projects in the Gainesville MPO Needs Plan is maintained for programming purposes. Therefore, the number one ranked candidate project was included at the top of the cost feasible plan list of projects and is in line for funding ahead of any other cost feasible plan project.

- **A large shortfall between revenues and needs plan costs remains a significant and widespread phenomenon, leading to a statewide 20-year shortfall estimate of $37.7 billion in Year 2000 dollars (a 43% increase over the statewide shortfall estimate from 1997).**

  Taking into consideration the issues related to the reporting of financial data and the identification of needed transportation improvements, it remains obvious that each MPO finds itself with too little revenue to meet anticipated needs within the timeframe of their individual long range transportation plan.

  Shortfalls for individual MPOs ranged from as low as $86.3 million to as high as $5.62 billion in Year 2000 dollars. Interestingly, the size of the individual metropolitan area was not always a determinant of the size of the shortfall, as some smaller MPOs reported larger financial shortfalls than MPOs in larger metropolitan areas. The statewide 20-year shortfall, expressed in year 2000 dollars, was estimated to be $37.7 billion. This is 43% greater than the $26.3 billion dollar shortfall estimated in 1997 (as expressed in Year 2000 dollars).

  This statewide shortfall estimate was calculated using information from each individual MPO plan, supplemented by information provided by MPO staff. Some adjustments were necessary to methodically compare the financial

information and arrive at a cumulative, statewide financial shortfall estimate. All financial data was adjusted to reflect year 2000 dollars. In order to account for differing plan horizon years (2020 and 2025) and different time periods covered by individual MPO plans (ranging between 15 and 25 years), an average annual shortfall estimate was calculated by dividing the total financial shortfall by the number of years covered by the plan. The cumulative average annual plan shortfall estimates were then multiplied by 20 to arrive at a statewide 20-year shortfall estimate, expressed in year 2000 dollars.

As has been previously noted, the composition of needs plan costs varied around the state. Some MPOs included operating costs in their total needs plan cost estimate. Some MPOs included highway, transit and other non-motorized project costs in their total needs plan cost estimate while others only included highway project costs. Other MPOs included some alternative combination of project costs. It was not always clear from the information available how various project categories contributed to the overall shortfall.

Suggestions

Based on the 2002 MPO LRTP review observations, the suggestions below are offered to improve the effectiveness and clarity of future LRTP updates.

- **Where possible, provide informative descriptions of issues faced, challenges overcome and policy decisions made in clear and simple language within the plan document.**

  An over-reliance on references to information contained in technical reports and appendices can obscure the core information provided in the primary document. Reducing such references and improving descriptions in the primary text will enhance the quality of the long range transportation planning process.

- **Incorporate a strong visioning process and principles of strategic planning into the long range transportation planning process.**

  The result will be a planning process that is grounded in a consensus view of what the community should look like in the future, identifies challenges faced in achieving that vision and fosters the development of strategies for addressing those challenges.

- **Recognize the interaction between transportation and land use by considering alternative land use scenarios.**

  This could be accomplished through a visioning process or other means. Whatever the approach, considering alternative land use scenarios would result in a more appropriate mix of planned transportation facilities and help bring the local land use planning process and transportation planning process into balance.

- **Clearly link the final list of cost feasible plan projects to plan goals, objectives, and policies.**

  This can be done through the application of measures of effectiveness, through project descriptions, or through a variety of other mechanisms. Linking cost feasible projects back to the original goals clearly documents the consistency of the decision-making process and strengthens the credibility of the process.

- **Integrate consideration of potential social and community impacts into the long range transportation planning process.**

  Consideration of potential social and community impacts will streamline the project development process for each individual project contained in the cost feasible plan and improve public acceptance of the plan in general.

- **Cooperatively develop guidelines for determining needed projects.**

  While every MPO should decide its own individual needs, the definition of need varies dramatically across the state. A few needs plans around the state appeared to include premium transportation options where a less expensive or less controversial option would have satisfied the defined transportation need. This inflates the reported cost of transportation needs in that MPO area and may reduce the credibility of the planning effort in the eyes of federal and state officials, as well as the general public. Developing and applying consistent guidelines for defining transportation needs would provide a more realistic assessment of actual needed transportation improvements and help normalize financial shortfall estimates around the state.

- **Where appropriate, consider non-highway improvements in place of, rather than in addition to, highway improvements.**

  Wherever feasible, MPOs should consider non-highway alternatives to meet identified transportation needs and other policy goals. This should include

not only transit, bicycle and pedestrian facilities, but also intelligent transportation systems technology and transportation demand management strategies. The result will be a truly multi-modal long range transportation plan that meets the mobility needs of the metropolitan area with the appropriate transportation mode under the appropriate circumstances.

- **Select cost feasible plan projects from among candidate projects using a systematic methodology that addresses a variety of policy concerns.**

  This will result in a project selection process that balances a variety of community concerns in a clear and defendable manner and enhances the ability of the responsible transportation agency to effectively implement the project. It will also reduce the over reliance on transportation modeling in the long range transportation planning process.

- **Cooperatively develop guidelines for reporting financial data.**

  The guidelines should cover the composition of revenues and costs, the timeframe to be covered by the financial data and the base year. Currently, the financial data contained in the state's MPO LRTPs varies from plan to plan. Different timeframes are covered, the composition of costs and revenues change from MPO to MPO and base years are inconsistent. Consistency in the reporting of financial data would make accurate statewide comparisons possible and enhance the ability of the MPOAC and FDOT to help MPOs meet the transportation needs of their regions and in turn the state as a whole.

- **Whenever possible and appropriate, coordinate planning activities with neighboring MPOs and stakeholder organizations.**

  This will result in improved transportation connections across county and regional lines. Also, involvement of stakeholder agencies will leverage their individual planning efforts and streamline the project development process by removing potential conflicts of interest and informing permitting agencies of potential projects very early in the process.

- **Take into account future right-of-way needs of planned transportation improvements through the advancement of corridor preservation strategies and concepts.**

  Identifying generalized future transportation right-of-way needs would provide a starting point for corridor preservation activities in a metropolitan area. Those activities may range from opportunistic advance acquisition

activities to negotiated right-of-way dedication through the land development process.

- **Define a specific mechanism or strategy for programming projects included in the cost feasible plan.**

  The establishment of a specific mechanism or strategy for funding cost feasible plan projects will streamline and simplify the annual programming process. It will also establish a stronger tie between long range transportation planning at the systems level and project planning at the individual project level by creating a transparent link between the two.

SUMMARY

Clear and significant improvements have been made in the long range transportation planning processes around the state and in individual plan documents. The plan documents are better organized, easier to read and significantly more descriptive. Public involvement and regional coordination is dramatically improved and the process is less reliant on modeling and includes a wider range of planning considerations. While clearly improved, additional enhancements could still be made. A series of suggestions are offered to enhance the effectiveness and clarity of future long range transportation planning in the state. In light of the improvements already made, MPOs will clearly continue to increase the value of Florida's regional long range transportation planning practices.