Organizational and Operational Review

of the

Florida Department of Transportation

Prepared for and in Consultation with the
Florida Transportation Commission

January 12, 2001

EXECUTIVE SUMMARY

This report presents the results of the operational and organizational review of the Florida Department of Transportation (FDOT), commissioned by the Florida Transportation Commission (FTC) pursuant to Senate Bill 772, and conducted by KPMG Consulting LLC. The operational and organizational review of the FDOT is intended to present opportunities for improving the Department's operation and enhancing the quality of service provided by the Department, its management and employees.

This report comes at a time when Florida state government is planning a strategic transformation in operations and service delivery. Florida's businesses and citizens are demanding continuous change in the "ways of government" - better, faster and cheaper service. Under the leadership of Governor Bush, Florida government will be transformed through the implementation of an Enterprise Model for government. The Enterprise Model will ensure that the focus of government is placed on its only customer, the citizens of Florida. The Enterprise Model will also ensure that redundant business functions are eliminated while productivity and value are increased by leveraging like services across the Enterprise. The Enterprise transformation revolves around practical strategies to improve service delivery, increase public safety, and enhance Florida's economic development by leveraging new technology, consolidating services, outsourcing non-core business functions, and public-private partnerships – establishing, maintaining, and continually improving the state's technical and economic infrastructure.

FDOT can play a major role and emerge as a leader in this transformation. The state transportation system plays a vital role in sustaining and expanding the state and regional economies by helping businesses gain access to markets and customers – through constantly improving mobility and safety. Millions of individuals and thousands of businesses rely upon this system for effective and safe movement of people, goods, and services throughout the state. FDOT is responsible for a core component of Florida's economic infrastructure.

As one of the fastest growing states in the nation, Florida's future transportation needs are staggering. Responding to those needs is the driving force for transformation. An effective response requires new ways of thinking, effective planning and prioritizing, innovative application of technology, practical funding strategies, and creative implementation approaches that motivate and measure service providers. As the owner of Florida's transportation system, FDOT serves the public as one of the most visible leaders in the transformation process for meeting future needs. Secretary Barry has made excellent progress in his effort to establish an environment focused on excellence and change. The secretary, applying concepts used in the Malcolm Baldridge award selection criteria is focused not only on becoming a model DOT but as a model business.

OBJECTIVES

The report objectives are to:

- Provide an objective basis for improving the FDOT's operation
- Assess whether the FDOT's current organization structure, functions and processes are properly aligned to effectively meet changing economic and demographic development patterns
- Evaluate potential impacts of technology and new economy on transportation revenue streams
- Provide alternative models for the Turnpike District
- Assess opportunities for outsourcing selected business functions
- Evaluate the capital program development and management processes
- Recommend changes to improve operational efficiency and responsiveness to the public

SCOPE

The scope of this study included the following key areas, as directed by the FTC:

- Organizational structure and staffing in FDOT's Central Office and eight District Offices
- Possible outsourcing of selected business functions
- Impacts to transportation revenue streams
- Maintenance and operation of the Department's toll highway facilities
- Process of planning, designing and constructing transportation improvements

APPROACH

The project team spent four months reviewing and evaluating FDOT's operation and organizational structure, capital program development and project delivery processes, and assessing potential impact on the fuel tax revenues due to advancement in technology and growing "On-line" economy. To accomplish these objectives, the project team relied on a variety of internal and external sources of information to evaluate the issues covered in this report, including documentation provided by the FDOT, interviews with FDOT management team and key staff members, questionnaire, and information collected from other state transportation agencies.

BLUEPRINT FOR TRANSFORMATION

It's important to note that FDOT has been recognized nationally as a leader and innovator in many transportation areas through the years. As appropriate, the report attempts to note their relevant accomplishments and on-going efforts as they relate to the opportunities and issues discussed. Having said that, it is important to understand that this report focuses on issues,

opportunities, and recommendations as they relate to strategic objectives and meeting *future* transportation needs.

Recognizing the need for change. Historical success and leadership, such as the Department has seen, often mask the need for continuing change. The Department cannot rest on past laurels. Information indicates that FDOT consistently provides a high level of transportation service and quality – at a correspondingly high level of cost. The Department has done well, but with staggering future transportation needs, severely limited resources, rapidly changing business and technology environments, and transformation in government strategies, there is an opportunity and demand to do better. This is the time and opportunity to create a new culture and it's success characteristics – streamline, agile, responsive, adaptive, smart, and strategic.

Aligning to the transformation. The whole of Florida's government is restructuring and transforming. The Governor has issued a challenge to reduce staff and cost by 25 percent over five years. The Department is proactively preparing a plan that meets or exceeds that challenge – reducing staff by 2,837 positions over the next five years. But that plan must be closely aligned with the strategic goals and objectives, to include consideration of the recommendations in this report. Continuing with their proactive nature the new organization must be carefully and thoughtfully designed, planned, and executed based on business need and operational strategy.

Establishing the goal. To establish a simple framework for creating the recommendations in this report and responding to the demands for doing more with less, two operational goals were considered:

- Increase operational efficiency and effectiveness in meeting the transportation needs with accountability through performance measures
- Continually close the gap between transportation needs and available resources while providing the transportation infrastructure necessary to support Florida's citizens and economic development

Problem Indicators. The information and analysis identified several indicators of problems that led to the recommendations in the full report. Those key indicators were:

- Estimated transportation needs significantly exceed estimated resources (Florida Intrastate Highway System [FIHS] $29B shortfall over 20 years)
- Critical and complex areas for project planning and management are less effective than they could be in areas of estimating, risk assessment and management, and contract management and may contribute to project cost and time overruns
- Staffing levels and related costs remain above a comparative peer and national average despite FDOT's leadership role in outsourcing and partnership strategies
- The Department continues to perform non-core functions (the reorganization/reduction plan is beginning to address some of these functions)

- Planning and application of Intelligent Transportation Systems (ITS) has been decentralized, resulting in districts/metropolitan regions implementing diverse and incompatible systems, insufficient to realize full potential benefits – ITS, and application of technology in general, must be integral to strategic planning
- Regional planning, collaboration, and coordination with and through the Metropolitan Planning Organizations (MPOs) is complex, inconsistent, and parochial, adding effort, time, and cost to planning and projects
- The Department acknowledges employee retention problems in critical skill areas – an issue that must be specifically addressed in the reorganization and reduction plan.

Prescriptive Opportunities. With these problems and the Department's history for innovation come opportunities for continued improvement. The Department should review and modify its strategic plan in the context of the 35 recommendations in this report. Some of these recommendations are easier than others to address and implement in the short-term. In focusing on nearer-term opportunities, the following specific areas should be addressed:

- Focus on core business functions – outsource or transfer non-core business functions
  - Expand outsourcing where private sector functions and capability exist
    - Outsource all Office of Toll Operations (OTO) functions
    - Expand the use of Asset Management-based contracts for highway maintenance to reduce service, administrative, and management costs
    - Consolidate professional services contracts to enhance regional coverage and reduce administrative and management costs
    - Leverage private sector or other governmental agencies to eliminate non-core functions like graphics, video, etc.

  - Transfer functions to other agencies

    - Transfer the Motor Carrier Compliance Office (MCCO) staff and responsibility to an organization that performs similar core functions
    - Migrate the Turnpike "district" to a Turnpike Authority to reduce size and increase revenue, etc.
    - Complete the integration and alignment with the State Technology Office (STO) to maximize the benefit of infrastructure technology in the future

- Organization and Staffing

  - In reducing staff and cost to meet or exceed the State's goal of 25 percent reductions, the Department must align organizational structure and staffing requirements to meet core business functions, outsourcing and partnership strategies, and manage service providers
  - Improve the project planning and management approach, process, and training to reduce cost and time overruns

  - Establish a program for training and retention of skilled resources that leverages the realities of career path and development, compensation, and estimated attrition to the private sector

- Technology

  - Develop a full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS
  - Complete efforts to establish a Department ITS strategic function and expand it to include industry participation in an advisory council to define vision, standards, approach, and partnership
  - Increase the emphasis on ITS and technology, in general, by aligning responsibility for technology at a strategic level in the organization

- Define legislative changes and additional funding assistance strategies to encourage MPOs to collaborate on regional projects

RESULTS IN BRIEF

Capacity and Need. Florida Intrastate Highway System (FIHS) capacity improvements have not kept pace with Florida's growth. Travel demand and congestion on the FIHS are increasing more than two-times faster than the Department can fund and construct lane miles to expand system capacity. Since 1990, travel and congestion increased approximately 30 percent, while the FIHS capacity expanded approximately 13 percent. An analysis updated in 2000 estimated FIHS needs of $47 billion by 2020. During this same period, revenues available for the FIHS were estimated at $18 billion, leaving an estimated shortfall of $29 billion by 2020. This need and resource gap underscores the demand for transformation and innovative thinking.

Review and prioritize need. FDOT management should revise its planning process to more accurately match expected available funding to the planned expansion of the program and project plan. While it is prudent to entertain more projects than can be funded, since some projects may be delayed and thus others can be accelerated, the current practice of forecasting a shortfall in excess of planned expenditure doesn't yield any favorable result, and in fact may reflect poorly on FDOT with regard to a perception that the "job is too big and can't get done."

Planning and Management. The annual construction element of Florida's Transportation Work Program contains over $2.0 billion in highway and public transportation improvements that must be planned, designed and constructed to meet defined schedules and budgets. While FDOT is successful in meeting its annual plan production and contract letting goals, there are opportunities to improve the efficiency of program and project management processes, systems and skills.

Projects vary widely in complexity – a simple culvert replacement project might cost only $50,000 and take less than two years to design and construct, while a new multi-lane highway or major river crossing might cost over $50 million and take 8-10 years to implement. Management processes and skills must support this range of complexity. Managing a multi-year program with thousands of complex projects in various stages of development requires sophisticated project management tools and capabilities. More effective management and control of major project components will provide an opportunity to reduce cost and time overruns.

Funding Strategies. The funding strategies available to FDOT, other than the major expansion of tolled facilities, do not generate sufficient revenue - to counter the downside risk in future fuel tax revenues. Nor do those strategies significantly contribute to closing the funding shortfall gap for the continued development of the FIHS through year 2020. To be effective, funding strategies should be derived from the following critical elements:

- **Transportation need**. The estimated $29B funding gap over the next 20 years – created by the $47B identified need offset by $18B in anticipated resources – cannot be fully met by a feasible and practical combination of existing and alternative revenue strategies.

- **Revenue impact strategies**. The report reviews the potential impact on the future fuel tax revenues due to technology and behavioral changes and presents several broader strategies for addressing the long-term transportation funding needs. The 20-year impact of potential lost fuel tax revenue is $3B. The recommended strategies for increasing revenue, combined in total, are not adequate to offset the projected $29B shortfall. (See Section 3)

- **Project planning and development**. Opportunities to improve the Department's program and project management processes, systems, and skills could significantly reduce project cost. The cost reductions could be realized through efficiencies in planning and estimating, scheduling, design, and management. Improved management processes would reduce controllable cost that contribute to cost and time overruns, supplemental agreement days, and claims. KPMG estimates that over 44 percent of the factors that contribute to cost and time overruns are within the project engineer's control and could be managed. For example, the cost overruns on completed projects for the last five years have averaged 12 percent. Each one percent reduction in annual cost overruns, that can be achieved through improved project planning and management, will save $160M over 20 years. (See Section 4 and Section 6)

- **Organizational and operational efficiency**. Potential cost savings and efficiency through organizational and operational restructuring, including expansion of outsourcing and public/private partnerships. The Department, in response to initiatives to reduce cost and staff by 25 percent over the next five years, has prepared a restructuring proposal that reduces staff by approximately 28 percent (2,837 FTEs). As the details of the restructuring plan emerge, they should be reviewed in the context of the Department's core functions. To be successful, the restructuring and staffing plan must be based on a "resource model" that

establishes the baseline in-house staffing levels and skills required for FDOT's core functions. The resource model should also address a career and succession planning strategy to ensure that the Department acquires and maintains these prescribed staffing levels and skills. (See Section 7)

- **Intelligent Transportation Systems (ITS)**. Nationwide, direct benefits from transportation system efficiency gains applying ITS are expected to reach $252B over 20 years. The report highlights strategies for effectively applying ITS for efficiency, revenue, and improved service. To date, there has been no enterprise level focus on ITS as a transportation solution element. The Department is establishing and staffing a function to include ITS in strategic planning. To be successful, the Department must reach out and include the technology solution providers in the strategic planning process and integrate ITS planning into the MPO process. With respect to overall potential benefits, from both public and private sector investment in ITS, initial analysis suggests that Florida could realize up to $12B in benefits over the next 20 years. A summary of the ITS opportunities and challenges include:

    - ITS Opportunities

        - Maximize Asset Utilization along parallel routes to reduce congestion and accidents
        - Ramp Metering and Traffic Signal Synchronization to control traffic flow
        - Information sharing to provide real-time information to travelers in planning and in route
        - Incident Management using wireless and satellite communication for emergency and safety assistance

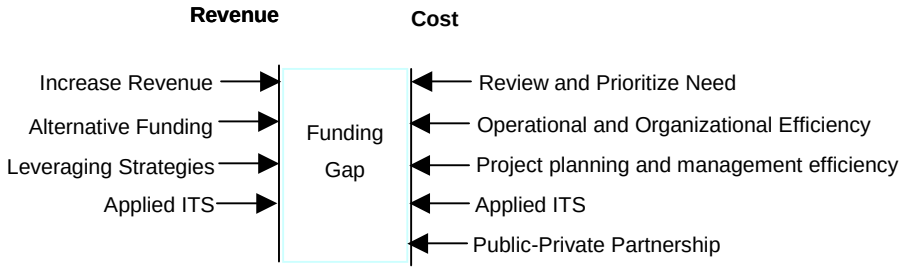
    - ITS Challenges

        - Establishing architecture deployment standards for ITS solutions
        - Selecting common or interoperable ITS software platforms
        - Establishing methods for inter-jurisdictional cooperation
        - Establishing an aggressive funding strategy for ITS implementation, operations, and maintenance

The project team recommends that FDOT establish a firm time-line for preparing the full-scale ITS deployment plan (e.g., within 6 to 9 months). The proposed ITS deployment plan should clearly outline FDOT's strategies for the deployment, operations and maintenance of ITS applications on a statewide basis, describe meaningful and tangible benefits of deploying ITS applications, and it should identify opportunities for establishing a public-private partnership for deployment, operations and maintenance of ITS applications in Florida. A reasonable strategy could begin realizing benefits within 18 to 24 months of completing the initial deployment plan.

Closing the gap. Taken individually, none of the elements summarized briefly above, and discussed throughout the report, have a cost or revenue impact significant enough to offset the estimated $29B funding shortfall of the FIHS in the 20-year plan. To properly address this gap, these elements should be addressed in combination as part of a Department transformation process. Cost, revenue, planning, and management strategies will contribute significantly to closing the funding gap and creating a program and project plan that aligns need with projected resources(Exhibit E-1).

Exhibit E-1: Closing the Funding Gap



Peer Group Comparison. To establish a foundation to evaluate FDOT's operations, a comparative analysis was completed as a part of this study (Appendix A). Relevant information was collected from neighboring states, and from states comparable to Florida in terms of transportation infrastructure, capital outlay and other characteristics. For each category of information collected, both the peer states average and the U.S. average are calculated and presented. The results of the comparative analysis indicate symptoms of possible operational and program/project management inefficiencies that should be investigated. For example, FDOT outsources nearly twice as much maintenance compared to their peer group, but the FDOT maintenance staff per lane mile is nearly double their peer average. Identifying the cause and effect of the analysis indicators would provide additional opportunities and strategies for operational and service delivery improvements.

Recruitment and Retention. The organizational and operational strategies should align staffing and organization with business functions and specifically address staffing, training, and retention requirements for providing effective, critical, core competencies. At a minimum, the core competencies must address both engineering and project planning and management disciplines. The recommendations include the concept of a "Transportation Academy" for developing and maintaining these core competencies through a planned curriculum that aligns consistency, productivity, and efficiency in execution with the Department's business and programmatic needs. The strategy should consider a private sector staffing model that classifies position requirements based on business need and competitively compensates skills to encourage retention and maximize productivity and effectiveness. In addition, the staffing model should be realistic – recognizing that state pay is not professionally competitive, and staff will leave for private sector opportunities. The plan can also leverage a strategy with the private

sector for executives on loan, DOT internships, and public/private partnership to swap resources.

Turnpike Organizational Models. The FDOT has retained Infrastructure Management Group, Inc. (IMG) to develop three strategic options involving the management and operation of the Turnpike District and assess the relative implications of each strategic option on the Turnpike District, FDOT and the State of Florida. The three options in the IMG study are the current district structure, privatization of the turnpike through lease or sale, and the creation of an "enhanced" district. The FTC, as part of this study, has requested KPMG to develop and assess the benefits of creating a separate Authority for the Florida Turnpike – a fourth option. The assessment includes a comparative analysis of the three IMG options with the Authority option. Presently, the IMG report to FDOT has not been completed and released. However, this draft report contains our qualitative analysis of the Authority approach. The Authority model presents a feasible public-private partnership that could manage Turnpike operations with a staff of 30-35 people.

Integrating Transportation into Florida's Enterprise Vision. Transportation is a major factor in the growth of our state – the transportation planning process must be integrated with growth management, operational transformation, and technology planning for the Florida Enterprise. The Department should embrace and actively seek to partner with other state agencies in joint piloting and implementing programs and technologies for improving performance and service delivery. Florida Enterprise areas that are combining thought leadership and economies of scale include:

- **Growth Management** – Multi-agency strategic planning for Florida economic development with a focus on future needs, performance measurements (outcomes), operational and organizational effectiveness and efficiency, physical infrastructure, and technical infrastructure.

- **Transformation Initiatives** – FDOT can leverage multi-agency initiatives for e-procurement, on-line bidding, human resources administration, financial management, project planning and management to accelerate the Department's operational and organizational improvements.

- **State Technology Office (STO)** – FDOT must embrace the transition of information technology into the STO. Achieving STO goals will improve the wide area communications capability, establish an infrastructure to support Intelligent Transportation Systems (ITS) integration, and reduce the cost of accessing and disseminating information.

SUMMARY OF PROPOSED RECOMMENDATIONS

The report presents recommendations, in each of the key areas, that are estimated to have high, positive impacts on cost, revenue, efficiency, and service delivery. Those recommendations are summarized in the table below.

Exhibit E-2: Recommendation Table

FDOT Assessment and Operational Review Recommendations
Chapter 3 – Revenue Impact Strategies 1) Strategies for augmenting STTF revenues Expansion of Turnpike Value Pricing – High Occupancy/Toll (HOT) Lanes Value Pricing – Express Lanes Shadow Tolls Naming Rights Joint Development– Resource Leveraging Asset Management – Infrastructure Preservation 2) Establish a threshold for supporting funding needs for the non-highway modes through the STTF 3) The Planning process should take into consideration expected available funding for the planned expansion of the FIHS
Chapter 4 - Project Development and Delivery 1) Re-engineer FDOT's program and project management processes, systems and organizational structure 2) Consider legislative changes and additional funding assistance to encourage MPO's to collaborate on regional projects 3) Streamline the process for certifying projects as Type 2 Categorical Exclusions 4) Accelerate the process for awarding professional service contracts 5) Automate and centralize contract advertising and letting functions for all construction contracts 6) Simplify design and plan preparation requirements for 100 percent state-funded projects 7) Improve FDOT's utility location and relocation capabilities

FDOT Assessment and Operational Review Recommendations
Chapter 6 - Alternative Service Delivery Strategies 1) Expand the use of alternative/innovative contracting methods for construction contracts 2) Expand the use of Asset Management-based contracts for highway maintenance 3) Consider grouping of professional services contracts to establish enhanced regional coverage 4) Change the Florida Statutes for Right of Way acquisition to reduce cost and time 5) Transfer the Office of Toll Operation function to the Turnpike District and Outsource the Toll Collection to private vendor(s) using the Revenue-Sharing Concept 6) Outsource and/or transfer selected support services and other non-core functions 7) Promote the use of alternative QA/QC concepts for construction and maintenance projects 8) Automate Human Resources functions
Chapter 7 - Organizational Structure 1) Realign and train FDOT staff to support a life-cycle approach to project delivery 2) Transfer the Office of Motor Carrier Compliance from FDOT to an organization that performs similar core functions – or – investigate alternatives to improve the MCCO operation within the Department 3) Establish baseline in-house staffing levels and skills requirements for FDOT's core functional areas (a Resource Model) 4) Establish a career and succession planning strategy for managers and leaders at FDOT 5) Revise measures used to assess FDOT's management and operational performance 6) Consolidate staff in offices that perform the Department's various QA/QC functions 7) Consolidate area engineer positions 8) Consider "corridor management" approach as an alternative to FDOT's current District organization 9) Discontinue inspection of private airports, rail tracks and railroad equipment

FDOT Assessment and Operational Review Recommendations
Chapter 8 – Other Strategic Issues
1) Develop a full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS
2) Establish an ITS advisory council to guide deployment of ITS in Florida
3) Complete the transition of the FDOT information technology function to the State Technology Office

We present this report in the hope that the recommendations for improvement outlined here will help the FDOT in its efforts to meet the challenges it currently faces and those that lie ahead.

1. INTRODUCTION

The Florida Department of Transportation (FDOT) is responsible for the planning, engineering, construction, maintenance, and operation of the state's transportation system – consisting of 39,730 lane-miles of highways and 6,253 bridges. The state transportation system plays a vital role in sustaining and expanding the regional economy by helping businesses gain access to markets and customers and by improving mobility. Millions of individuals and businesses each year rely upon this system for the effective and safe movement of people, goods, and services throughout the state. Having such an important role, it is essential that the transportation system operate effectively and efficiently.

FDOT's operation, with more than ten thousand employees[1] and $4.5 billion annual operating budget, has an affect on nearly every facet of transportation – from highways to railways and airports to seaports. FDOT is accountable to a variety of stakeholders including state residents, businesses, the Governor, the Legislature, local governments, and transportation industry partners and agencies. Leading the state transportation system, FDOT serves the public in one of the most visible capacities in all of state government. The level of service required to meet the current and future needs of these stakeholders and other customers is highlighted by the fact that:

- Florida is one of the nation's fastest growing states – the future demand on the State Highway System (SHS) is likely to exceed the planned capacity improvements
- The SHS represents only 10.4 percent of the total public roads in Florida; however, it accounts for more than 65.0 percent of daily vehicle miles traveled (DVMT)
- Florida ranks third in the nation in terms of DVMT on the state maintained roads. Florida has almost 2.5 times more vehicular traffic (distance traveled) compared to the national average
- The number of vehicle miles is growing faster than the number of new lane miles being built – number of lane-miles on the SHS has increased by 6.6 percent since 1990; whereas DVMT has increased 32 percent during the same time period

Given the importance of the state highway system to Florida's economy and limited amount of resources available for the extensive highway system, FDOT must manage its resources cost-effectively to meet the many demands placed upon the state's transportation system.

During the 2000 legislative session, the Governor and the Legislature passed Senate Bill 772 to identify areas of improvements to the FDOT's organization in order to streamline and optimize the efficiency of the department. Senate Bill 772 directed the Florida Transportation

[1] FDOT has developed a phased plan to reduce staff by 28 percent (2,837 positions) over five years. The first phase of that plan will be implemented in FY2001/02.

Commission (FTC) to conduct a study to evaluate the FDOT's current organizational structure and determine its responsiveness to Florida's changing economic and demographic development relationships and report the results of the study back to the Governor and the Legislature by mid December.
This report presents the results of the organizational and operational review of the FDOT, conducted by KPMG Consulting LLC with assistance from Pilot Computer Services, Inc. This introductory chapter provides a brief overview of the objective, scope, methodology and approach, and outline of the study. This information provides a framework for understanding the recommendations addressed in the remainder of this report.

The report is organized into the following chapters:

- Department Overview
- Revenue Impact Strategies
- Project Development and Delivery
- Turnpike and Toll Operations
- Alternative Service Delivery Strategies
- Organizational Structure
- Other Strategic Issues
- Next Steps

1.1 PROJECT OBJECTIVE

The operational and organizational review of the FDOT is intended to present opportunities for improving the Department's operation and enhancing the quality of service provided by the Department, its management and employees. Specifically, the objectives are to:

- Provide an objective basis for improving the FDOT's operation
- Assess whether the FDOT's current organization structure, functions and processes are properly aligned to effectively meet changing economic and demographic development patterns
- Evaluate potential impacts of technology and new economy on transportation revenue streams
- Evaluate alternative models for the Turnpike District
- Assess opportunities for outsourcing selected FDOT business functions
- Evaluate FDOT's capital program development and management processes
- Recommend changes to improve operational efficiency and responsiveness to the public

1.2 PROJECT SCOPE

The scope of this study included the following key areas, as directed by the FTC:

- Organizational structure and staffing in FDOT's Central Office and eight District Offices
- Possible outsourcing of selected business functions

- Impacts to transportation revenue streams
- Maintenance and operation of the Department's toll highway facilities
- Process of planning, designing and constructing transportation improvements

The project team spent four months reviewing and evaluating FDOT's operation and organizational structure, capital program development and project delivery processes, and assessing potential impact on the fuel tax due to advancement in technology and growing "On-line" economy. To accomplish the project objectives, the project team relied on a variety of internal and external sources of information to evaluate the issues covered in this report, including documentation provided by the FDOT, interviews with FDOT management team and key staff members, questionnaire, and information collected from other state transportation agencies.

1.3 PROJECT METHODOLOGY

The operational and organizational review of the FDOT was conducted using proven methodologies and tools developed by KPMG Consulting LLC. A brief description of various information gathering techniques, employed throughout the organizational and operational review, is presented below.

Reviewing data provided by the Department. The project team reviewed information pertinent to FDOT to familiarize ourselves with the FDOT's organizational structure and programs and to gain a clear understanding of the challenges it faces. This included reviewing applicable organization and program descriptions and responsibilities, planning and budget documents, administrative operating policies and procedures documentation, project databases and historical materials.

Electronic Survey. The project team developed a web-based survey instrument to collect feedback from FDOT management and key staff on many aspects of the FDOT's operation. The electronic survey was distributed to approximately 150 managers, supervisors and selected staff to compile information on FDOT's organizational structure, policies, procedures and practices, performance measures, and outsourcing. A total of 90 electronic surveys were completed – a response rate of 60 percent. The survey provided the project team with a valuable perspective from line managers.

Conducting interviews. The team conducted over 70 individual interviews and 14 focus group sessions to cover a wide range of perspectives, functions and services. The project team obtained information on the responsibilities and roles of various sections/functions within FDOT, as well as views on barriers to effective management of the Department's activities and resources. Among those we interviewed:

- The Florida Transportation Commission members and staff
- FDOT executives and senior management team
- District Secretaries and key staff members

- The House and Senate Transportation Committee staff
- Representatives from the Federal Highway Administration's Florida Division office
- Selected Florida Toll authorities
- Metropolitan Planning Organizations
- Members of the Florida Transportation Builders Association
- Members of the Florida Institute of Consulting Engineers (FICE)

Conducting site visits. To gain a better understanding of FDOT's operations, the project team visited three of seven districts – District 1 (Bartow), District 6 (Miami), and District 7 (Tampa). Field visits provided the project team with an opportunity to observe district operations from a first-hand perspective and obtain input from managers and supervisors responsible for the day-to-day operations.

Comparative analysis – peer benchmark. The project team collected information from multiple sources, including interviews with representatives from other state transportation agencies, federal and state statistics, and a database gained from prior KPMG projects with state transportation agencies. As part of the study, the project team compared FDOT to transportation departments in states of Georgia, South Carolina, North Carolina, Texas and Virginia, as well as to national averages on key variables.

We present this report in the hope that the recommendations for improvement outlined here will help the FDOT in its efforts to meet the challenges it currently faces and those that lie ahead.

2. DEPARTMENT OVERVIEW

This chapter presents a high level overview of FDOT's mission, organization and staffing, revenues and expenditures, policies and procedures, and key performance measures.

2.1 INTRODUCTION

The Florida Department of Transportation (FDOT) is responsible for the planning, design, construction, maintenance, and operation of all roads, bridges and transportation systems within the state-maintained transportation network, as well as a sizable network of seaports, airports, railroads and public transit. The Department is also accountable for local systems (bridges, SCRAP, SCOP, etc.) and for interfacing with local government on growth management or local transportation system issues.

FDOT's mission is:

> ***"…to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities."***

The State Highway System (SHS) consists of 11,980 miles of roads and 6,253 bridges. The SHS represents approximately 10 percent of Florida's total public roads, but carries more than 65 percent of all traffic. During the 1990 Session of the Florida Legislature, lawmakers created the Florida Intrastate Highway System (FIHS) to establish a statewide transportation network of roadways providing for high-speed and high-volume traffic movement within the state. The FIHS system represents approximately one-third of the SHS; however, it carries nearly half of all traffic on the SHS.

Exhibit 2-1 provides a breakdown of the Department's highway system by total miles and total lane miles.

Exhibit 2-1 – Florida State Highway System

Category	Centerline Miles	Lane Miles
Interstate	1,471.9	7,136.2
Turnpike & Toll	547.5	2,279.2
Other Principal Arterials	6,037.6	20,312.3
Minor Arterials	3,348.5	8,779.5
Urban/Major Collector	565.2	1,204.1
Rural/Minor Collector	9.4	18.9
TOTAL MILES	**11,980.1**	**39,730.2**

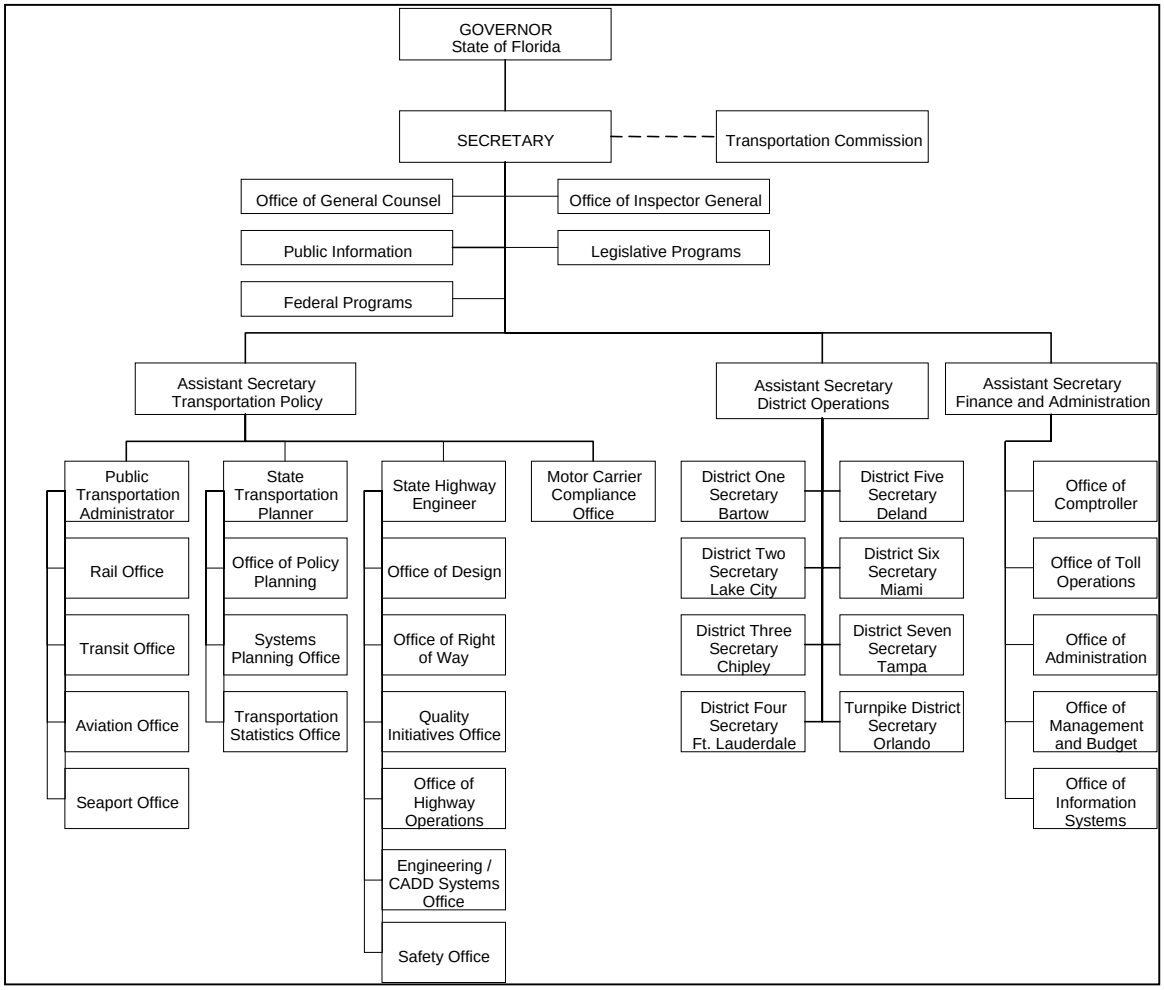
Source: FDOT

2.2 ORGANIZATION AND STAFFING

FDOT is headed by a Secretary, appointed by the Governor, and supported by three Assistant Secretaries, eights District Secretaries, and 10,376 full time employee positions. (The current FDOT reorganization/reduction plan reduces staff by 2,837 positions and eliminates one of the three Assistant Secretaries.) The Florida Transportation Commission, composed of nine Commissioners appointed by the Governor and confirmed by the Florida Senate for a four-year term, serves as a citizen's oversight board for the FDOT.

FDOT is organized into the Central Office and eight district offices. The Central Office in Tallahassee is responsible for policy, procedure, standards, training, and quality assurance functions, while FDOT's eight district offices are responsible for planning, engineering, constructing, and maintaining the SHS with fundamental commitments to rail, aviation, seaports, and public transportation. Exhibit 2-2 presents a high-level organization chart for the Department.

Exhibit 2-2: FDOT Organization Chart



Source: FDOT

2.2.1 Public Transportation Administration

The Public Transportation Administration is charged with the responsibility to promote safe, interconnected public transportation systems in Florida by providing grants, technical assistance and planning support to local governments and private entities that own and operate these systems. The Public Transportation Administration is headed by an administrator who oversees the activities of the transit, rail, aviation and seaport offices.

FDOT is statutorily required to commit a minimum of 15 percent of State Transportation Trust Fund revenues to public transportation projects. These projects, which are primarily contained in the State Transportation Improvement Program (STIP) and regional Transportation Improvement Program's (TIP), include vehicles purchased for transit systems, railroad grade crossing improvements, land acquisition and facilities construction for airport and seaport expansion. In addition to grant activities, the Public Transportation Administration provides technical assistance to public transportation owners and operators and develops strategic plans that describe the state's goals and objectives and approach for improving aviation, rail, seaport and transit systems.

2.2.2 Office of the State Transportation Planner

The activities of the State Transportation Planner are carried out through the offices of Policy Planning, Systems Planning and Transportation Statistics. The administrative office for the State Transportation Planner is responsible for coordinating the activities of the three offices as well as preparing and managing FDOT's Central Office Planning Work Program, coordinating the Economic Development Transportation Fund Program and managing the Intergovernmental Coordination and Review Program.

The Office of Policy Planning is responsible for developing, documenting, and monitoring a statewide and metropolitan planning process, including the Florida Transportation Plan and the Agency Strategic Plan. This Office also provides interface with growth management.

The Transportation Statistics Office is FDOT's central clearinghouse and principal source for highway data collection and analysis.

The office gathers data on:

- The features, characteristics, and usage of highway facilities and services within the state
- Trends and patterns of vehicle traffic characteristics

The Office of Systems Planning provides policies, procedures, training and technical assistance for statewide programs in Systems Traffic Computer Modeling, Air Quality Modeling, Access Management, Site Impact Analysis, Congestion Management, Interchange Justification, and Level of Service and Performance Measures. The Systems Planning Office also develops and maintains the Florida Intrastate Highway System Plan and provides information, support and review in the programming of FIHS projects.

2.2.3 District Offices

A District Secretary is responsible for managing the day-to-day operations of the FDOT district. The districts differ in organizational structure somewhat; however, they are organized along the following four major functional units:

- Administration
- Planning
- Production, and
- Operations

The roles and responsibilities of these functional units include, budget, planning, program development, design, surveying and mapping, environmental management, right-of-way administration, construction, maintenance, traffic operations, materials testing, safety, public transportation, public information, consultant management, purchasing, fiscal services, human services, general counsel, and information systems.

Exhibit 2-3 presents information about total number of centerline miles, lane miles, number of bridges on the State Highway System, daily vehicle miles traveled, geographic area, and estimated population served by each district.

Exhibit 2-3: Districts Information

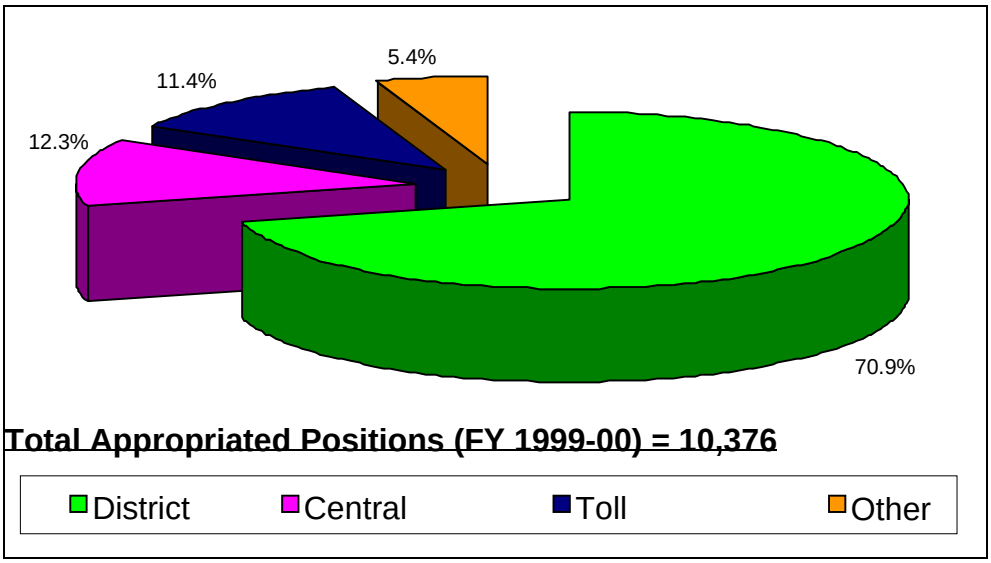
Description	Total Centerline Miles	Total Lane Miles	Number of Bridges on the SHS	Daily Vehicle Miles Traveled (thousands)	Geographic Area (sq. miles)	Estimated Population
District 1	1,832.7	5,570.5	905	31,044.5	11,629	1,984,780
District 2	2,536.3	7,749.4	1,136	38,044.7	11,865	1,603,379
District 3	2,386.8	6,377.2	793	24,666.4	11,378	1,218,650
District 4	1,224.1	5,150.3	723	42,361.1	4,837	2,890,693
District 5	1,939.7	6,647.6	889	47,468.6	8,282	2,734,007
District 6	647.4	2,628.7	566	26,957.1	2,989	2,175,960
District 7	1,013.7	3,919.3	633	31,115.6	3,177	2,393,006
Turnpike	399.4	1,687.2	608	12,456.2	N/A	N/A
Statewide	**11,980.1**	**39,730.2**	**6,253**	**254,114.2**	**54,157**	**15,000,475**

Source: FDOT

As of July 21, 2000, FDOT had 10,376 authorized staffing positions, of which, 9,718 staffing positions were filled and 658 positions were vacant. Exhibit 2-4 presents a breakdown of FDOT

staffing by functional units. Employees represented in "Other" category include Motor Carrier Compliance and Gainesville Materials Lab staff.

Exhibit 2-4: FDOT's Staffing Positions



Source: FDOT

The project team conducted a high level staffing analysis to compare FDOT staffing with other state departments of transportation. The four categories used for analyzing the staffing data were: number of full-time equivalent employees, staffing distribution by functional area, highway maintenance staffing per lane-mile of state administered highways, and capital outlay for roads and bridges per technical and support staff.

Considering key differences between FDOT and its peer state transportation agencies in levels of outsourcing, annual capital program size, highway maintenance responsibilities, and statutory requirements, FDOT appears to be overstaffed in several core functional and administrative areas:

- Planning
- Right-of-Way
- Materials and Research
- Highway Maintenance and Operations
- Personnel Administration
- Legal Services
- Fiscal Services

Results of our analysis are presented in Appendix A.

2.3 REVENUES AND EXPENDITURES

The state transportation program in Florida, as in most other states, is funded from revenues generated from fuel taxes, vehicle license fees and funding contributions provided by the Federal Highway Administration Highway Trust Fund, Federal Aviation Administration Airport & Airway Trust Fund, and Federal Transit Administration.

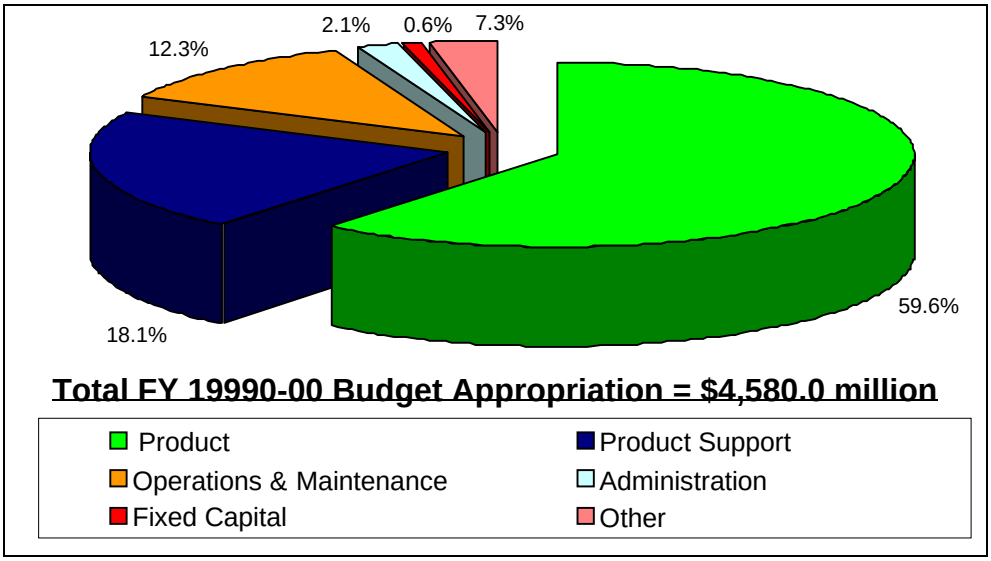
2.3.1 Revenue Sources

The majority of the State Transportation Trust Fund revenues are generated by the state's motor fuel tax, with additional monies coming from motor vehicle license fees, and vehicle registration and title fees. FDOT also receives federal aid apportionment, obligated by US Congress from revenues generated from the federal motor fuel tax and other excise taxes. Revenues/funds collected from various sources are deposited into the State Transportation Trust Fund and appropriations to the Department are made through the State Transportation Trust Fund. Funds are allocated among the seven districts by detailed formulas and procedures.

2.3.2 Expenditures

In accordance with Florida Statutes 339.135, the Department Secretary is required to formally adopt the Work Program each year. By statute, the Work Program must be balanced to cash and revenue forecasts. In fiscal year 2000-01, FDOT received $4.58 billion in funding appropriation to fund its operations and capital programs. Exhibit 2-5 presents a detail breakdown of funding appropriations by program plan categories for fiscal year 2000-01.

Exhibit 2-5: FDOT Budget Appropriation (FY 2000-01)



Source: FDOT

As indicated in the Exhibit 2-5, the large majority of the annual budget appropriation – approximately $2.73 billion or roughly 60 percent – is used for various product elements, which

include land, pavement, bridges, transit vehicles, and grants to develop aviation, transit, intermodal access, rail and seaport systems. Other major budget allocations are directed to product support services (approximately $828 million or about 18 percent) and operations and maintenance activities (more than $561 million or around 12 percent). Product support activities include preliminary engineering, construction engineering and inspection, right-of-way support, environmental mitigation, materials testing and research, planning and public transportation functions. Operations and maintenance comprise activities that support and maintain the transportation infrastructure.

2.4 POLICIES AND PROCEDURES

FDOT has established and documented formal, structured policies, rules, procedures, and standards to carry out the day-to-day functions. Presently, there are more than 320 procedural documents, 39 manuals, approximately 550 forms, numerous transportation statutes and codes that provide guidance to the Department management and staff. Unlike many other state transportation departments, FDOT provides an easy access to current transportation related laws, regulations, policies, procedures, and other documents through its web site.

FDOT has instituted the *Standard Operation System* procedure that provides a uniform system for developing, formatting, outlining and maintaining the department's policies, procedures, standards, manuals, and guidelines. Input received from our interviews and focus group sessions with FDOT management and staff, and feedback received, through management survey, from FDOT managers and supervisors suggests that:

- The current policies and procedures are not carried out uniformly throughout the state
- Changes/revisions to FDOT's policies and procedures are not communicated effectively on a statewide level
- Large number of policies, procedures, manuals and forms have created a process-centric environment that often promotes bureaucracy

2.5 CHALLENGES

Like many of its counterparts across the country, FDOT is facing both increasing demands for better services and an increasing need to prove its value to the public. Although FDOT has responded well to the challenge of providing higher levels of service by making changes in the way it does business, FDOT recognizes that there is much more to be done.

Among its greatest challenges are the following:

2.5.1 Geography

Florida is a large state both in terms of its physical size and in terms of its population base. Over the next 20 years, Florida's population is expected to grow from approximately 15.0 million

to more than 20.0 million. Visitors coming to Florida are likely to increase from 48.7 million in 1998 to nearly 83 million during the next two decades. Additionally, there are great variations in population density, from the state's major metropolitan areas to medium-sized emerging cities and rural communities. From a transportation perspective, these conditions often raise issues about equity and getting a "fair share" of the state's transportation resources. Collectively, these factors and conditions suggest that Florida's mobility needs will continue to be staggering for the foreseeable future.

2.5.2 Economic Growth

The condition of the transportation infrastructure is closely linked with how well a particular region or the state as a whole prospers economically. The significant growth of the state has outpaced projections and has placed a significant pressure on the existing transportation system. As a result, congestion in metropolitan areas has increased, combined with the growing challenge of getting people to and from work. FDOT recognizes that both the State Highway System (SHS) and the Florida Intrastate Highway System (FIHS)play vital roles in sustaining and expanding Florida's economy, and that a high quality, highly efficient transportation network is essential in order for Florida to remain competitive. For example, the FIHS serves approximately 85 percent of Florida's gross state product by linking 18 counties. The FIHS carries over 90 percent of Florida's airfreight and passengers by linking major airports, and it connects major deep-water ports that represent more than 90 percent of Florida's waterborne trade and passengers.

2.5.3 Emergency Evacuation

FDOT is a member of the State Emergency Response Team (SERT) responsible for the management of the preparedness, response, and recovery activities during an emergency situation. FDOT plays a very important role during the natural disaster situations by preparing and designating evacuation routes and managing traffic conditions. During hurricane Andrew, nearly 750,000 people from Monroe, Dade, Broward, and Palm Beach counties were evacuated. Many people from flood prone areas of Lee and Collier counties were also voluntarily evacuated.

FDOT is responsible for ensuring that the state highway infrastructure allows safe and timely evacuation of affected people – FDOT has to be ready to do all it can to avoid loss of life due to individuals trapped on the highways. Such preparedness calls for FDOT to continuously evaluate the conditions and capacity of evacuation routes and make necessary investment for new construction, reconstruction, transportation system management, and transportation demand management.

2.5.4 Retaining Qualified Staff

To accomplish its mission and objectives, FDOT needs to attract and retain people with the requisite skills in diverse areas. There are several factors, as listed below, that could severely affect FDOT's ability to attract and retain certain skilled and technical staff in the future.

- The healthy state of Florida's economy combined with FDOT's growing work program ($29 billion over the next five years) has created a high demand for technical resources, especially engineering and information technology personnel

- Transportation planning and environmental regulations such as the Clean Air Act, the Clean Water Act, and TEA-21 have dramatically increased the complexity and effort involved in planning, designing and constructing new transportation facilities and services

- Recent changes enacted by House Bill 2393 lowers the vesting period for state employees – effectively July 1, 2001, a 6-year vesting period is implemented for the defined benefit program of the Florida Retirement System

- FDOT has limited ability to compete with the private sector due to substantial differences in the compensation structure

2.5.5 Competing Needs

Like many of its counterparts, FDOT is required to balance the demand for public transportation, new highways, and roads with the need to maintain and improve the existing transportation system. Even though funding for the FIHS has increased since 1994, the current revenue estimates suggest that about 68 percent of FIHS improvements needed by year 2010 remain unfunded.

2.5.6 Changing Expectations

FDOT, like other public organizations across the state and the nation, is being asked to do less with less and work smaller and smarter. Changing demographics, a rapidly expanding economy, advances in technology and internal organizational pressures are combining to create higher demands for quality, responsiveness and timeliness – often without additional resources. It is quite clear that public service organizations, like FDOT, will not have the option to get bigger to meet increasing demands for better services. Instead, they will be required to find innovative ways to improve efficiencies, reduce staff, and reduce costs.

2.6 KEY MEASURES

Florida Statutes section 339.155(4) requires the FDOT to report progress made towards achieving goals and objectives included in the Short Range Component of the Florida Transportation Plan to the Legislature each year. FDOT's Annual Performance Report allows decision makers to assess the Department's performance in terms of meeting its goals and objectives. However, the report does not provide relevant information about how FDOT compares to its peer states.

The project team collected information from neighboring and peer agencies, federal statistics, and state and regional documentation to conduct a comparative assessment. Results of our analysis are presented in the following five categories:

- Capital outlay for roads and bridges per Federal-aid highway lane-mile
- Maintenance expenditure per lane-mile
- Daily vehicle miles traveled per lane-mile
- Percentage of bridges below current standards
- Congestion
- Safety

The results presented herein are intended to serve as a high-level view of the FDOT and set the stage for the recommendations that make up the remainder of this report[1]. Appendix A includes additional information regarding key measures and peer benchmarking.

2.6.1 Capital Outlay for Roads and Bridges

Capital outlay is expressed in terms of total dollars spent annually for the construction, addition, or improvement of roads and bridges, resurfacing of existing roads, and safety related projects. FDOT's annual capital outlay for roads and bridges exceeded $2.4 billion in fiscal year 1998-99.

For the purpose of comparing capital outlay per lane-mile, the project team has selected the Federal-aid highway lane-miles as the basis to provide a more balanced approach (Federal-aid highway lane-miles includes all highways that are eligible for Federal aid). According to the FHWA's *Highway Statistics 1998*, FDOT ranks second in the nation behind California in terms of total capital outlay for roads and bridges. In terms of the lane-miles on the Federal-aid highways, FDOT ranks 11th in the nation.

Exhibits 2-6 and 2-7 present the total Federal-aid highway lane-miles information and capital outlay ($ thousand) per Federal-aid highway lane mile for FDOT and peer states respectively.

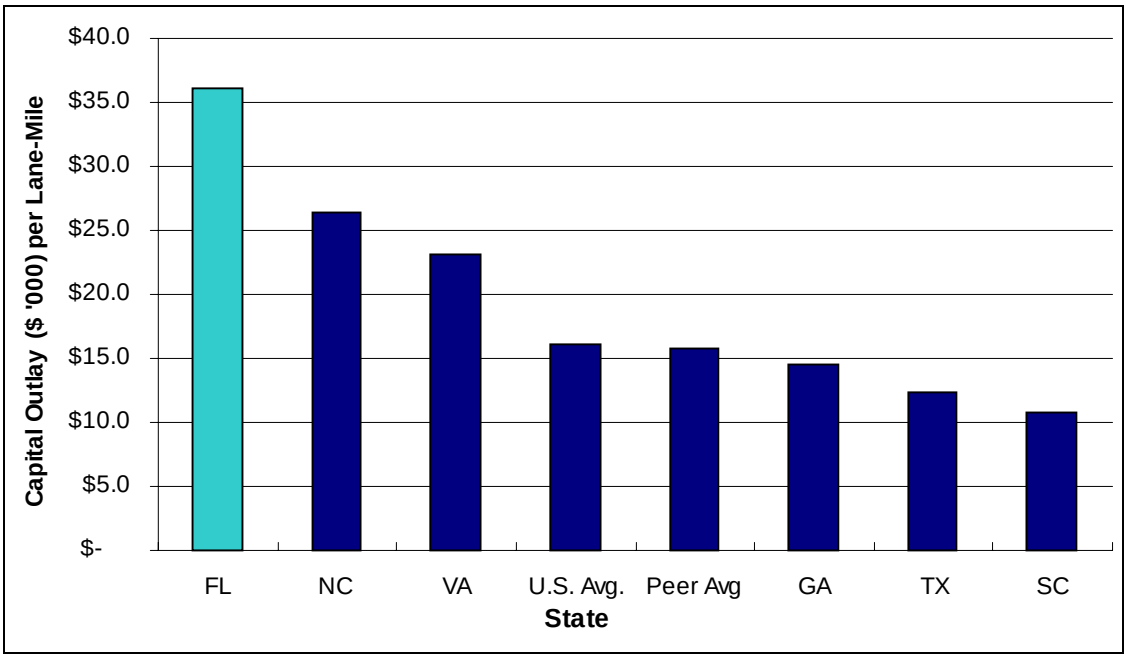
[1] Highway statistical information is not necessarily comparable across all states due to many state-to-state differences. As such, when making state level comparisons, it is inappropriate to use these statistics without recognizing those differences that impact comparability.

Exhibit 2-6: Federal-Aid Highway Lane-Miles

State	National Highway System			Other Federal- Aid Highways	TOTAL
	Interstate	Other	Total NHS		
Florida	7,070	9,860	16,930	50,419	**67,349**
Georgia	6,491	10,039	16,530	55,703	**72,233**
North Carolina	4,441	8,096	12,537	37,682	**50,219**
South Carolina	3,514	5,454	8,968	31,808	**40,776**
Texas	14,860	33,694	48,554	142,493	**191,047**
Virginia	5,290	8,948	14,238	39,680	**53,918**
Peer States Average	6,919	13,246	20,165	61,473	**81,638**
U.S. Average	4,120	6,656	10,776	34,378	**45,154**

Source: FHWA Highway Statistics, 1998 Table HM-48

Exhibit 2-7: Capital Outlay ($ thousand) per Federal-Aid Highway Lane Mile



Source: FHWA Highway Statistics, 1998 Tables SF-4 and HM-48

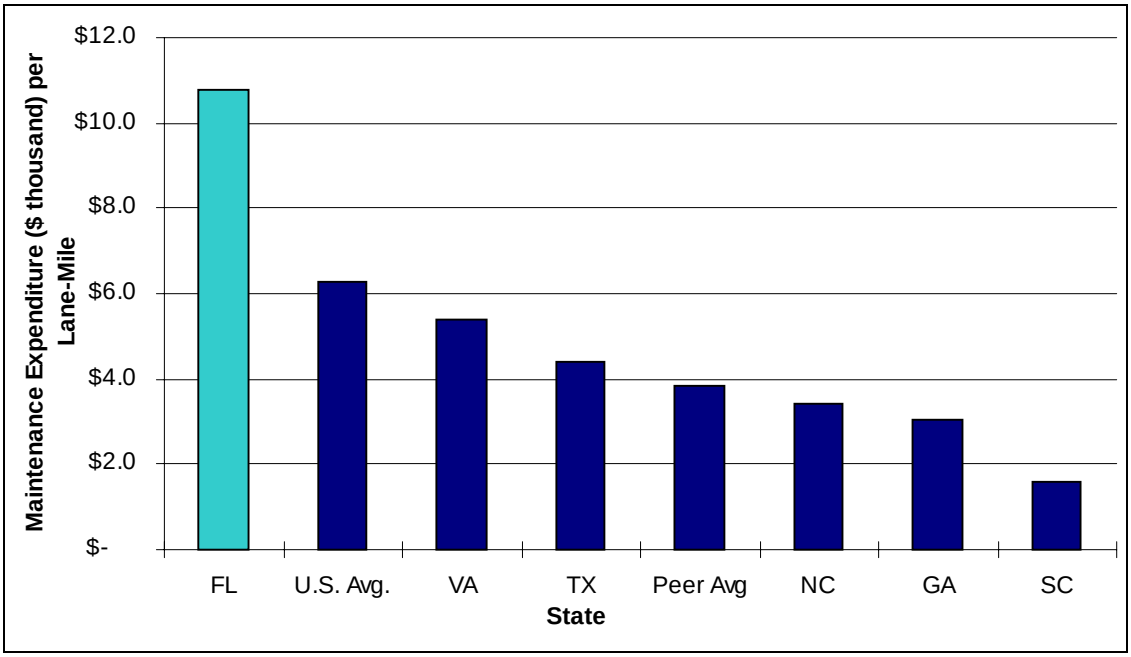
As shown above, capital outlay for roads and bridges per lane-mile of the Federal-aid highway indicates that FDOT spends more than two times the average of its peer states and the national average. The project team recognizes that some factors unique to Florida – more urban roads and higher Right-of-Way acquisition costs – may be contributing to the higher capital outlay, on a per lane-mile basis of the Federal-aid highway. However, these factors alone cannot justify why Florida's capital outlay on a per lane-mile basis of the Federal-aid highway is 2.25 times the average of its peer states and the national average.

2.6.2 Maintenance Expenditure per Lane Mile

According to the FHWA's Highway Statistics 1998, FDOT ranks seventh in the nation in terms of the total amount spent on maintenance and highway services annually. However, in term of maintenance expenditures per lane-mile of the state administered highways, FDOT ranks fourth in the nation, behind New York, California and Pennsylvania.

Exhibit 2-8 presents total maintenance expenditures ($ thousand) per lane-mile of the state administered highways for Florida and peer states.

Exhibit 2-8: Maintenance Expenditure ($ thousand) per Lane Mile[2]



Source: FHWA Highway Statistics, 1998 Tables SF-4 and HM-81

As indicated above, annual highway maintenance expenditures, on a per lane-mile basis, indicates that FDOT spends nearly three times more compared to the average of its peer states and 1.75 times more that the national average.

There are several factors, as listed below, that could be contributing to the higher maintenance expenditures on a per lane-mile basis for Florida.

- Approximately 52 percent of FDOT's roads are classified as urban roads, whereas, less than 20 percent of roads are classified as urban for the peer states and the U.S. average –

[2] Maintenance expenditures per lane-mile can vary between States depending upon a number of factors including differences such as climate and geography, how each State defines maintenance versus capital expenditures, traffic intensity and percent trucks, degree of urbanization, types of pavement being maintained, and the level of system responsibility retained by the State versus that given to other levels of government.

typically urban roads have much higher maintenance requirement and are more costly to maintain (maintenance of traffic, drainage, substructure and superstructures, emergency response, etc.)

- Florida ranks third in the nation in terms of the total daily vehicle miles traveled (DVMT) on the state maintained roads – California and Texas have higher DVMT than Florida – typically, higher DVMT corresponds with higher maintenance requirements

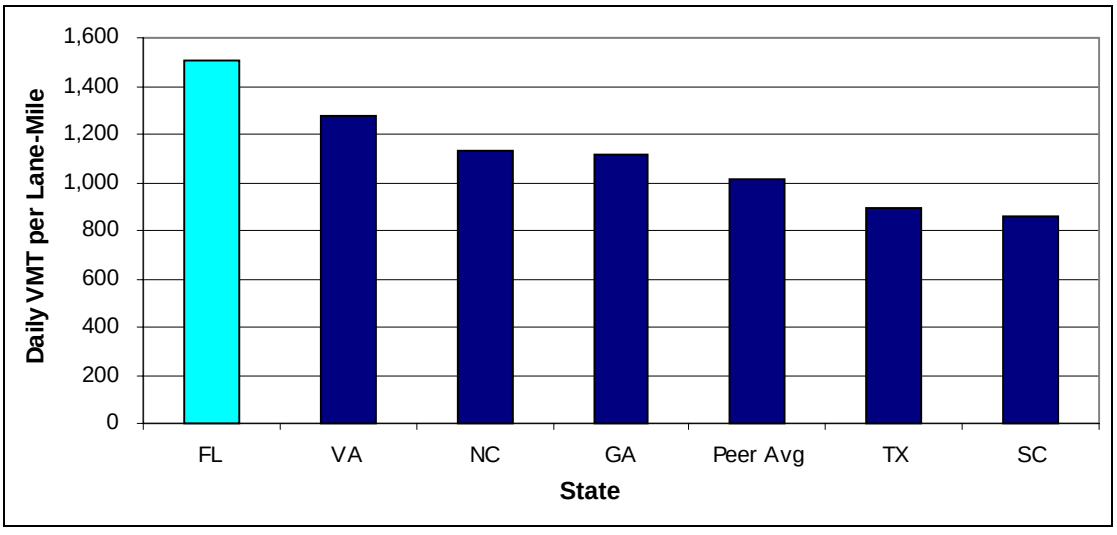
The project team recognizes that these factors could have considerable impact on the highway maintenance expenditures on a per lane-mile basis. However, other more manageable factors such as FDOT's in-house and consulting costs associated with administering and managing a large number of maintenance contracts, large number of work orders, project inspection, and materials testing may be contributing to the higher maintenance costs.

2.6.3 Daily Vehicle Miles Traveled (DVMT) per Lane Mile

Florida is experiencing a 3 to 4 percent increase in the vehicle miles traveled each year. Daily vehicle miles traveled is a measure of the demand for vehicular travel, taking into account both the number of vehicles and how far they travel. Much of the State's growth in VMT is happening on the State Highway System – the SHS represents 15.7 percent of total public roads, in terms of lane-miles, in Florida and it carries approximately 66 percent of DVMT. Also, since 1990, the number of lane miles on the SHS has increased 6.6 percent, whereas, vehicle miles traveled on the SHS have increased 32.0 percent.

Exhibit 2-9 presents daily vehicle miles traveled per lane mile for FDOT and peer states.

Exhibit 2-9: Daily Vehicle Miles Traveled per Lane-Mile



Source: FHWA Highway Statistics, 1998 Table HM-81

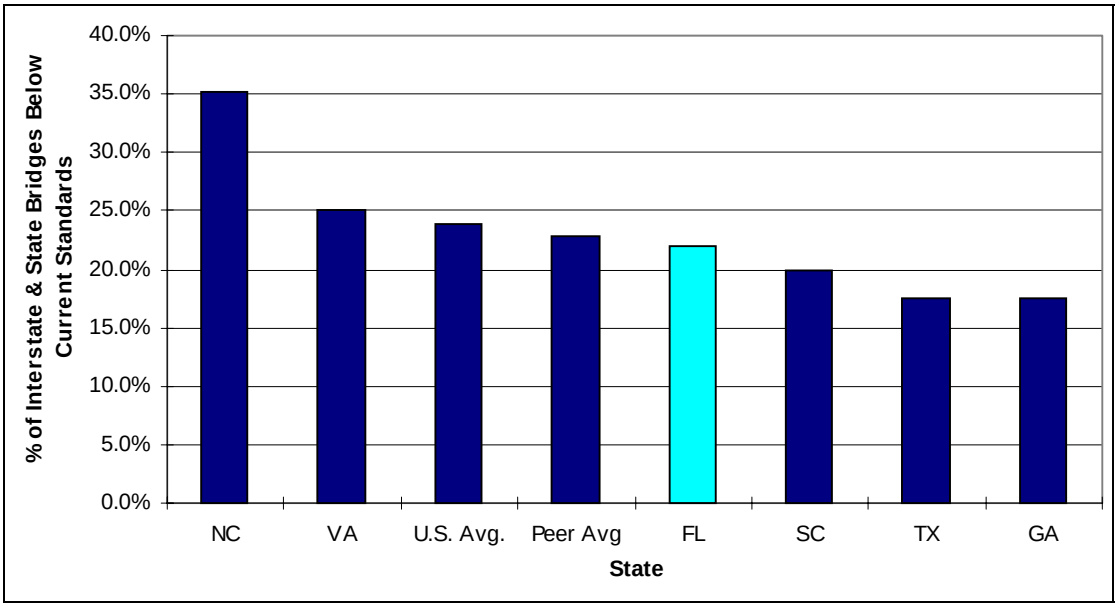
As shown in Exhibit 2-9, Florida has almost one and a half times more vehicular traffic (distance traveled) compared to the average of its peer states, as measured by the daily vehicle miles traveled on a per lane-mile basis.

2.6.4 Percentage of Interstate and State Bridges that are Below Current Standards[3]

FDOT is responsible for maintaining 6,253 bridges on the SHS and is also responsible for inspecting and rating nearly 4,900 other bridges owned by other state and local government jurisdictions. Each bridge is inspected at least once every two years to assess bridge condition and identify need for routine maintenance and/or rehabilitation. Florida ranks 24th in the nation in terms of percentage of bridges that are below the current standards. Substandard bridges are defined as those that are either structurally deficient (in poor condition or have insufficient load-carrying capacity) or functionally obsolete (narrow, poorly aligned, inadequate or under clearance).

Exhibit 2-10 presents the percentage of interstate and state bridges that are below current standards for Florida and its peer states.

Exhibit 2-10: Percentage of Interstate and State Bridges that are Below Current Standard



Source: Better Roads Magazine 1999 Bridge Inventory

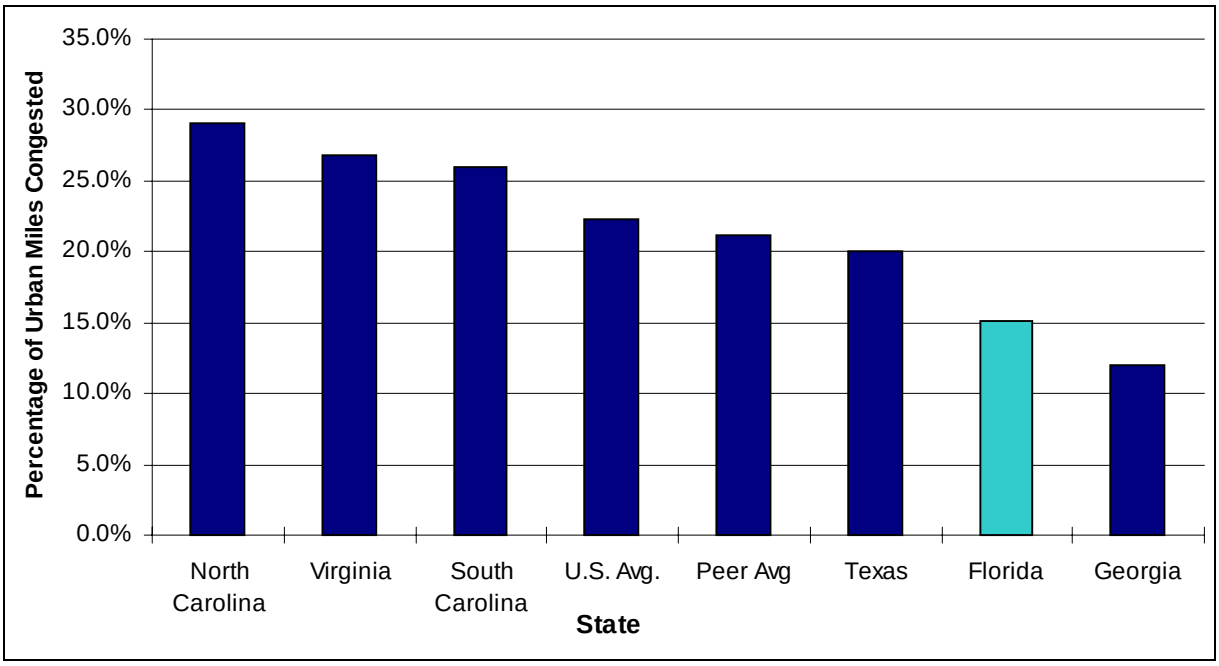
As presented above, Florida compares favorably to its peer states and the national average in terms of percentage of interstate and state bridges that are below the current standards. Beginning in fiscal year 1994-95, FDOT started including only structurally deficient bridges as part of the substandard bridges. As such, functionally obsolete bridges are not included as part of the substandard bridges, even though they do not meet the current design standards. Under the FDOT's method, approximately 92.0 percent of bridges on the SHS meet the Department's structural standards.

[3] Interstate and primary bridges are traditionally maintained by state DOTs across the county. Bridges below current standards are those classified as either structurally deficient or functionally obsolete. Since 1979, Better Roads Magazine has been reporting bridge data through interviews with the state highway engineers for all state DOTs.

2.6.5 Congestion

Congestion can be defined as a situation when the current transportation system cannot satisfy the demand placed upon it by travelers. Over the past ten years, the number of vehicle miles traveled in Florida has increased by more than 32.0 percent, whereas the SHS grew (number of new lane miles added to the SHS) by 6.6 percent during that period. Typically, congestion occurs when the volume of traffic to service-flow ratio exceeds 80 percent. Exhibit 2-11 presents the percentage of major urban roads – interstate, other freeways and expressways, and other principal arteries congested, as measured by traffic volume to service flow ratio, for Florida and its peer states.

Exhibit 2-11: Percentage of Major Urban Roads Congested



Source: FHWA Highway Statistics, 1998 Table HM-61

Overall, Florida's urban roads are less congested compared to its peer states and the national average. However, Florida's interstate roads are getting increasingly congested. FDOT data indicates the percentage of traffic heavily congested during rush hour (defined as period between 5:00 pm and 6:00 pm) on the FIHS in the seven largest urbanized counties is approaching 28 percent and according to the FHWA *Highway Statistics 1998* approximately 35 percent of Florida's interstate roads are congested. If this trend continues in the future, the FIHS will be hard pressed to function as a statewide transportation network serving high-speed and high-volume traffic movement which was the Legislative intent behind creating the FIHS.

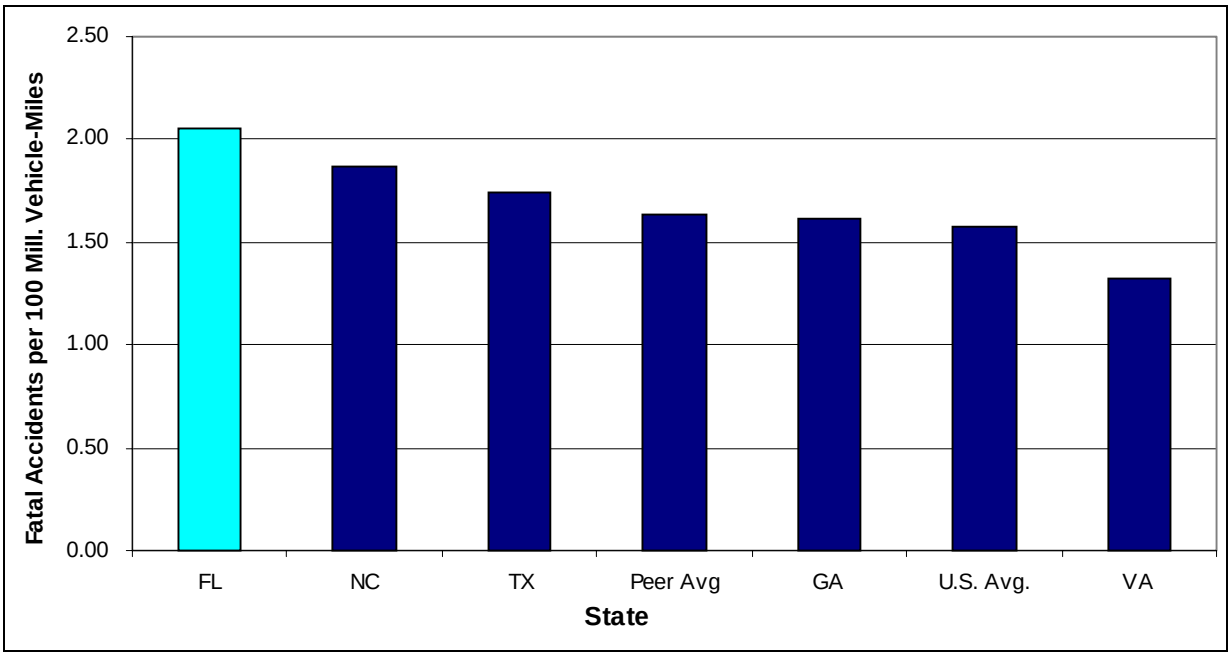
2.6.6 Safety

The number of highway fatalities per 100 million vehicle miles of travel is a widely used indicator to measure highway safety. The project team analyzed the safety of states roads by calculating fatal accidents per 100 million vehicle miles of travel for Florida and its peer states.

On average 2,900 fatalities occur annually on Florida's highway. Florida ranks third in the nation, behind Texas and California, in terms of persons fatally injured in motor vehicle crashes. Compared to the national average, Florida's fatality rate is approximately 0.5 point higher for each 100 million vehicle miles of travel. Several factors impact highway safety – vehicle condition, weather, highway condition, driver skills or impairment, and presence and use of safety equipment – and often, state transportation agencies have limited control over these factors.

Exhibit 2-12 presents the fatal accident rate per 100 million vehicle miles traveled.

Exhibit 2-12: Fatal Accident Rate per 100 million Vehicle-Miles Traveled



Source: FHWA Highway Statistics, 1998 Tables FI-10 and FI-20

Additional information regarding key measures and peer benchmarking is included in Appendix A.

3. REVENUE IMPACT STRATEGIES

This chapter discusses sources and uses of funds, current transportation financing programs, anticipated funding needs for the Florida Intrastate Highway System, importance of the state fuel taxes and potential impact on the future state fuel tax revenues due to the recent technological and behavioral changes, and presents recommended strategies for addressing the long-term funding needs of the state transportation system.

3.1 INTRODUCTION

This section of the report addresses the following topics:

- Sources and uses of funds with regard to the State Transportation Trust Fund (STTF)
- Current transportation financing programs and financing options under consideration by FDOT
- Transportation needs for the Florida Intrastate Highway System (FIHS) and other modes
- The importance of the state fuel taxes and potential technological and behavioral impacts on state fuel tax revenues
- Recommended strategies for long-term funding of the STTF focusing on continued expansion of the FIHS

The focus of this section is on the future funding of the STTF in general with a specific focus on the funding of the FIHS. The major issue relates to the reliance on fuel tax revenues and the technological and behavioral impacts that may arise in the future that could impact fuel use and state fuel tax revenues. Financing strategies that represent alternatives to the fuel tax are discussed. Ultimately, to lessen reliance on state fuel tax revenues will require new modified strategies, potentially including significant increases in toll facilities to expand the FIHS and cooperative use of intelligent transportation systems (ITS) with other states to institute effective weight-distance taxes.

3.2 SITUATION ANALYSIS

FDOT funds state transportation projects from a variety of funding sources. The primary revenue sources are fuel taxes and registration fees. Florida has adopted a layered approach to levying fuel taxes. This enables local jurisdictions to impose fuel tax levies in combination with state taxes to generate funds for local projects. The following section describes the sources and uses of funds for the current fiscal year.

3.2.1 Source of Funds

The discussion regarding sources of funds was derived from the FDOT Finance and Administration Management Overview, dated July 31, 2000. The State Fuel Tax (i.e., the fuel sales tax) is indexed to the Consumer Price Index (CPI), with rate changes effective each

January 1. The current rate is 9.3 cents per gallon. For fiscal year 2000-01, net receipts for the State Transportation Trust Fund from the State Fuel Taxes are estimated at $801 million. The State Comprehensive Enhanced Transportation System (SCETS) Tax is also indexed to the CPI and current rates vary between 2.6 cents per gallon and 5.1 cents per gallon on gasoline, based on the county's level of locally imposed fuel taxes. The SCETS tax rate on diesel fuel is 5.1 cents per gallon. Currently, the maximum rate of 5.1 cents per gallon for gasoline is imposed in 63 of the 67 Florida counties, the exceptions being Franklin, Hamilton, Okaloosa, and Taylor counties. In fiscal year 2000-01 estimated net receipts are $419 million. Proceeds of the SCETS Tax must be spent in the transportation district and, to the extent feasible, in the county from which they were collected.

The motor vehicle related charges are comprised of vehicle license fees, title fees, and initial registration fees. In fiscal year 2000-01, the estimated net receipts are $582 million. Another fee imposed on motorists is the Rental Car Surcharge, which is levied at $2 per day for the first thirty days that a vehicle is either rented or leased. In fiscal year 2000-01, the STTF is estimated to receive $109 million in Rental Car Surcharges. The Aviation Fuel Tax is imposed on fuels consumed in aviation at the rate of 6.9 cents per gallon. In fiscal year 2000-01, the STTF will receive $57 million in Aviation Fuel Tax revenues.

The Florida Legislature passed a major transportation funding package – Mobility 2000 – during the 2000 legislation session, entitled Senate Bill 862. This plan provides over $2.6 billion of additional funds for transportation over a ten-year period without raising taxes.

- For many years, a portion of gas tax collections and motor vehicle fees has been diverted away from transportation projects to other general needs of the state. SB 862 redirects $1.8 billion of these diverted transportation user taxes to fund transportation over a ten-year period

- $605 million of "one-time" General Revenue funds generated from the State's healthy economy will be invested in transportation over a three-year period

- Bonds, commonly referred to as GARVEE bonds may be issued for up to $325 million, that net of debt service will generate $100 to $200 million during the ten-year period. The bonds would be repaid from Federal funds

In addition to the taxes previously discussed which are distributed to the STTF, there are three state imposed highway fuel taxes that are distributed to local governments to fund transportation projects. These taxes include the Constitutional Fuel Tax (2 cents per gallon), the County Fuel Tax (1 cent per gallon), and the Municipal Fuel Tax (1 cent per gallon). Distributions of these taxes to local governments in fiscal year 2000-01 are $342 million. These fuel taxes may be spent on local or state transportation projects that local officials deem necessary.

Appendix C contains Exhibit C-1, which provides summary details of the tax revenue sources discussed above and provides details on the funding appropriation from the Federal Highway Administration (FHWA), Federal Aviation Administration (FAA) and Federal Transit Administration (FTA) grant programs, and estimates of revenues from local option fuel taxes.

3.2.2 Uses of Funds

The material addressing uses of funds was derived from the FDOT Work Program, Finance, and Budget Process Overview, updated July 27, 2000.

The uses of funds follow a process recognizing that project identification/programming differs from execution. FDOT operates with a ***commitment budget***. That is, the appropriations received from the Legislature each year are for the planned commitment of funds. The actual ***disbursement*** (payout) of funds resulting from such commitments may occur over a period of months or years.

Florida Statutes require that the Department's programs be driven by "policies" and by "goals and objectives." These are outlined in the Florida Transportation Plan. The division of funds between programs in a manner that will lead to accomplishment of these policies and objectives is accomplished through the 10-year ***Program and Resource Plan*** each year. Program levels contained in the plan are ***"balanced"*** to projections of available funding (from the Finance Plan).

The new Work Program is formally "adopted" by the Department's Secretary each July. Before the Department can undertake any project, that project must be part of the ***Adopted Work Program***, which is updated annually for the ensuing five year period. If a project is not listed in the ***Adopted Work Program***, the Department cannot undertake it without formally processing an amendment to the Adopted Work Program in accordance with Florida Statutes, Section 339.135.

The FDOT districts develop the Department's Work Program, working with Metropolitan Planning Organizations (MPOs) and local governments. Input is also received through public hearings, the Legislature, and the Governor's Office. As a result of this input at the local level, the first three years of the five-year work program represent the state's transportation commitment to local governments. At the local level, the program has to be consistent with the capital improvement elements of the local government comprehensive plans. The FDOT districts identify projects and develop schedules based on project priorities within the limitations of the funds allocated to them.

The current FDOT Work Program was adopted in July 2000. The Work Program contains four major categories:

- Product, which consists of right-of-way acquisition and preparation, construction and public transportation;

- Product Support, which consists of in-house and contract staff who perform studies, produce design plans, acquire right-of-way, inspect and manage construction work and administer public transportation plans;
- Operations and Maintenance, which consists of staff and materials to operate and maintain the State Highway System, and to collect tolls and enforce motor carrier compliance laws;
- Administration, which includes FDOT staff and consultants who perform fiscal, information systems, legal, budget, personnel, reprographics, and contract administration functions.

Exhibit C-2 in Appendix C provides full details on the FDOT Work Program for the next five and ten year periods.

3.3 CURRENT TRANSPORTATION FINANCING PROGRAMS

The discussion of current transportation financing programs was derived from the FDOT Office of Management and Budget, Financial Planning Office, Transportation Financing, August 1999.

Florida currently has a number of financial tools available including pay-as-you-go and limited leveraging programs. Some of these tools, which have been utilized very effectively, include Right of Way Acquisition and Bridge Construction Bonds, GARVEE Bonds, Advanced Construction, Toll Facilities Revolving Loans, State Infrastructure Bank, and toll revenue leveraging. Highlights include:

- Pay-as-you-go financing is currently used for 100 percent of the Federal resources and over 94 percent of State resources available for Florida's transportation needs funded through the State Transportation Trust Fund

- The Right of Way Acquisition and Bridge Construction Bond program provides about $2 billion in bond funds to leverage over $18 billion in total project costs during the 14 year period from fiscal year 89/90 to fiscal year 02/03

- The Advanced Construction program advances an average of $4 billion in Federal projects during the five-year work program period

- Over $1.4 billion in toll projects have been developed using $153 million in loans from the Toll Facilities Revolving Trust Fund

- About $2.8 billion in total projects are being advanced through about $422 million in loans from the State Infrastructure Bank

- GARVEE bonds, which will be used to accelerate projects, by bonding future Federal appropriations through the FHWA categorical programs

The major financing mechanism for accelerating programs/projects is debt issuance. This option has been addressed by the Division of Bond Finance, "Debt Affordability Study". Based

on existing debt programs, Florida's debt service ratio was projected to average 6 percent through year 2000. If this ratio is held constant and if base case forecasts of 4.4 percent average annual growth are realized, the State's future bond capacity through 2005 would be $12.3 billion.

The projected debt issuance under the exiting bond programs over the10 years through 2005 is estimated at $9.0 billion, leaving debt capacity for new bonding at $3.3 billion. It is important to note that this debt capacity relates to state programs for education, environment as well as transportation, implying this debt capacity if used would probably be spread among a variety of infrastructure investments that included but were not exclusive to transportation.

In addition to the programs cited above, Florida's Turnpike and various expressway and bridge authorities have developed major transportation facilities in Miami, Tampa, Orlando, Lakeland, Ft. Lauderdale, and bridges in the Panhandle near Destin and Gulf Breeze through bonding toll revenues, with backing from the State Transportation Trust Fund through operation and maintenance covenants.

3.3.1 Additional Financing Strategies

FDOT has either implemented or is in the process of implementing a number of additional leveraging strategies. Examples of additional financing strategies implemented are presented below:

- State Funded Flexible State Infrastructure Bank (SIB)
- Expansion of funding for the Toll Facilities Revolving Trust Fund
- Expansion of Advanced Construction
- Raising the cap of the Right-of-Way and Bridge Construction Bond program
- Expansion of the Local Government Loan Program (LFR and LRFR)

Examples of additional financing strategies under consideration include:

- Additional Bonding of STTF state revenues
- Bond other state revenues in the STTF
- Expansion of Toll Financing
  - Added new stand alone facilities
  - Fully utilizing existing toll systems bonding capacity
  - High-Occupancy-Toll (HOT) lanes
  - Expanding operation and maintenance subsidies for toll facilities
- Raise cap limit on issuance of GARVEE bonds
- Incentives to Maximize Local Option Taxes for Transportation
- Redirect Transportation Funds being used for Other Purposes to the STTF
- Index Local Option Fuel Tax

- Taxing Districts for Transportation Improvements
- Leasing of Air Space and Right-of-Way
- Commercialization of Rest Areas
- Road Branding, through selling naming rights

Based on the information gathered, studied and presented, FDOT has either implemented or is in the process of implementing the following additional leveraging options for immediate program development:

- State Infrastructure Bank – establishing a SIB project evaluation committee, whether interest should be charged for SIB loans, increasing the visibility of the SIB, and adding a local match component to criteria for SIB loans

- Maximizing toll financing, including additional stand alone facilities, expansions supported by toll system revenues such as the Turnpike, Orlando-Orange County Expressway Authority, and Miami-Dade Expressway Authority, and Tampa-Hillsborough County Expressway Authority considering additional operation and maintenance covenants, and High Occupancy Toll lanes

- Undertaking a separate study to examine the issue of public-private ventures and how to encourage additional public-private partnerships

These financing strategies represent a mix of financing mechanisms to leverage resources to accelerate project implementation and create new revenue sources. Financing mechanisms do not generate additional funds. New revenue sources come from actions such as expansion of toll facilities and exercising the full option available for local jurisdictions to expand tax effort.

3.4 TRANSPORTATION NEEDS

Against this backdrop of an expanding work program and innovative financing initiatives through FDOT is a growing inventory of transportation needs. The State's transportation system consists of 11,980 centerline highway miles, 6,253 bridges, 760 aviation facilities, 14 seaports, 23 bus systems, and 2,888 railway miles. The number of highway miles, bridges, and other facilities seems large; however, the current transportation system in many areas is inadequate for the needs.

Florida is one of the fastest growing states at a time when people are increasing the vehicle miles that they are traveling each year. Nationwide, there has been a 77 percent increase in the vehicle miles traveled, 52 percent increase in motor vehicle registration, 34 percent increase in the population, while there has only been a 2 percent increase in the road and street mileage between 1976 and 1996.

The transportation needs in Florida can be characterized in several major categories such as:

- Increased road capacity and other improvements to support population growth and demographic changes
- Assistance in providing mass transit alternatives
- Continued improvements in transportation safety measures
- Enhancing economic development opportunities

The needs in Florida for improvement and expansion in highways, transit, seaports, airports, and other transportation facilities have been documented in various studies. For example:

- Florida's seaports will need about $1.3 billion to accommodate anticipated growth over the next five years
- The Florida Aviation System Plan estimates that the total cost of needed improvements of airport capacity, terminals, parking and access over the next 10 years is $6 billion

Additionally, the referendum passed in the latest election regarding building high-speed rails in Florida could require millions of dollars worth of investment over the next several years. Presently, FDOT does not have any program that provides funding assistance to intercity/high-speed rail projects. Establishing a new program that provides funding assistance to high-speed rail initiatives could potentially drain valuable financial resources away from the highway projects.

Two more detailed examples of needs include the Florida Intrastate Highway System and major transit facilities in Florida. These needs are briefly outlined below.

Transit systems are primarily locally developed and operated, and are funded primarily through Federal grants supported with a local match. The FDOT is a very important partner, as is the Federal government, with a strong interest in the success of each system. The following summarizes transit needs as reported by local agencies.

A recent survey reported by FDOT in "Transportation Financing, August, 1999" of MPOs in Florida was conducted in May 1999. Each MPO was asked to identify their transportation needs by category, as listed in their adopted long-range transportation plans (LRTPs). The survey indicates that 44 percent of the MPOs' transportation needs over the 20-year period are in the area of public transportation, compared with 37 percent for the FIHS and 20 percent for "other arterials." This amounts to a total documented need of $17 billion in capital and operating needs for transit over the 20-year period covered by the MPO Long Range Transportation Plan.

The Florida Intrastate Highway System is vital to interregional movement and the health of Florida's economy. This network of roadways includes interstate highways, Florida's Turnpike system, selected expressways and major arterial roadways. The FIHS serves high volumes of automobile and truck travel and connects the State's major airports, seaports, rail passenger

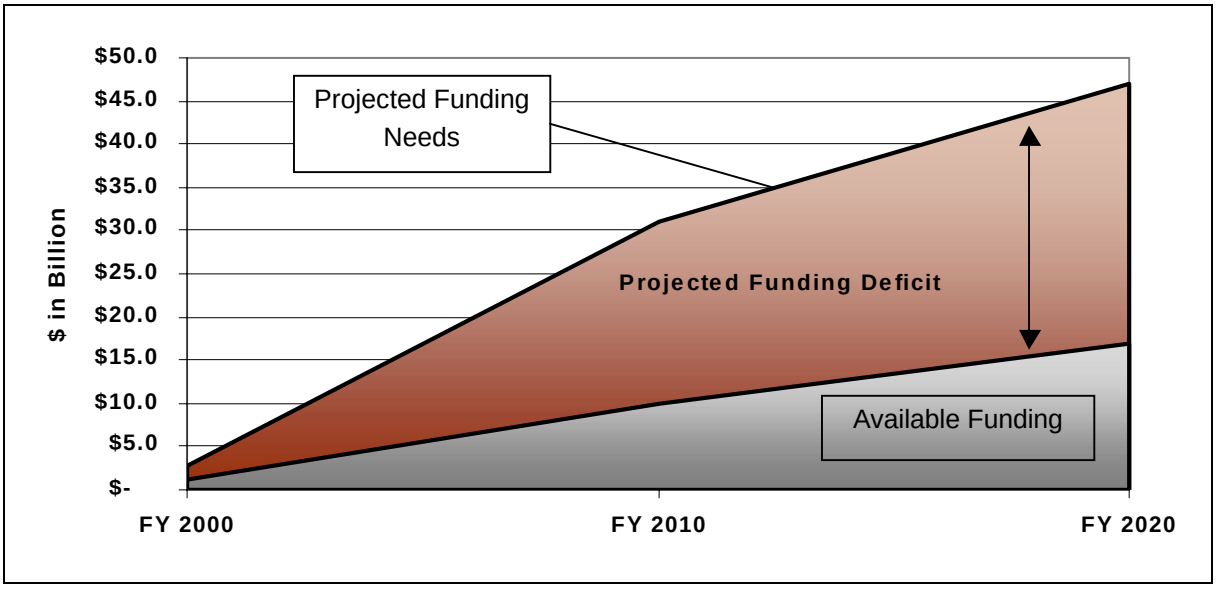
stations and freight facilities. Although it represents only 3 percent of Florida's public roads, it carries over 30 percent of all traffic in Florida and 70 percent of the truck traffic using the State Highway System.

The FIHS connects the top twelve economic counties in Florida, which account for about 70 percent of all non-farm industry earnings. The FIHS serves Florida's top international airports, which together carry over 90 percent of Florida's air freight and passengers. Likewise, the FIHS serves Florida's major deep-water ports that carry over 90 percent of Florida's water-borne trade and passengers. This major economic activity is located along FIHS corridors providing connections to regional and interstate markets.

FIHS capacity improvements have not kept pace with Florida's growth. Travel demand and congestion on the FIHS are increasing more than two-times faster than the Department can fund and construct lane miles to expand system capacity. Since 1990, travel and congestion increased approximately 30 percent, while the FIHS capacity expanded approximately 13 percent. An FDOT analysis updated in March, 2000 estimated FIHS needs of $47 billion by 2020. During this same period, revenues available for the FIHS were estimated at $18 billion, leaving an estimated shortfall of $29 billion by 2020.

Exhibit 3-1 depicts the growth in the shortfall for funding expansion of the FIHS through year 2020.

Exhibit 3-1: Revenue Shortfalls for FIHS Funding Needs



Source: FIHS Modal Plan Summary Report, June 2000

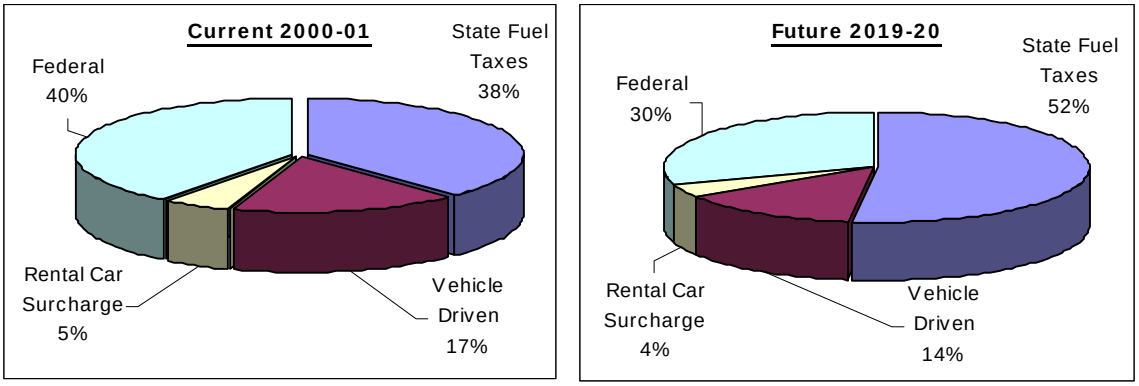
As presented above, by fiscal year 2020, the FIHS would have projected funding shortfall of $29 billion. FDOT also has a significant role in implementing and maintaining the highway network and Strategic Intermodal Initiatives, which are not part of the FIHS. As mentioned

earlier, the high-speed rail referendum could potentially further magnify the funding deficit for the FIHS and the State Highway System over the next several years.

3.5 THE IMPORTANCE OF STATE AND FEDERAL FUEL TAX REVENUES

The STTF relies heavily on state and federal fuel tax revenue to generate funding for all modes. Exhibit 3-2 provides estimates of the percent distribution of revenues that constitute available funding.

Exhibit 3-2: Percent Distribution of Revenues that Constitute Available Funding



Source: Florida Consensus Estimating Conference, updated June 29,2000

As shown in the Exhibit 3-2, there is an increasing reliance upon the state fuel tax for transportation funding from year 2000-01 to year 2019-20. By year 2019-20 over half of state transportation revenues are projected to be derived from the state fuel tax. In the short-term and into the intermediate term this would appear to be an acceptable funding strategy since Florida indexes the state fuel tax, which combined with increasing travel volume results in inflation adjusted growth in state fuel tax revenues. For the longer term, uncertainties exist stemming from technological and behavioral impacts that increase the risk associated with increased reliance upon state fuel tax revenues. Any slippage in fuel tax growth would add to the shortfall for funding the FIHS and the entire state system.

3.5.1 Technological and Behavioral Impacts on State Fuel Tax Revenues

Changes in fuel consumption will be dependent on the direction and pace of technological change and changes in behavior associated with technology. The effects will be twofold. Technological and behavioral changes will have positive and negative effects on fuel consumption and the resulting state fuel tax revenues and, correspondingly, have opposite impacts on the use of the FIHS in particular and the Florida highway system in general.

Exhibit 3-3 provides summary information on possible technology and behavior impacts on fuel tax revenue and use of the highway system. Some of the impacts have reasonable bases for developing quantified estimates of effects on fuel consumption and revenues, e.g., vehicle efficiency and alternative fuels, while others are thought to have effects that have not been fully

quantified, e.g., ITS applications consisting of GPS navigation, intelligent signs, and automated traffic flow. Increased VMT and growth rate of tourism, which lead to increased fuel consumption and increased state fuel tax revenues are factored into the FDOT forecasting methodology, thus these impacts have been accounted for.

Exhibit 3-3 Technology and Behavior Impacts on Fuel Tax Revenue and Use of System

Change	Description	Potential Effect on Fuel Tax Revenue	Potential Effect on Use of Transportation System
Vehicle Efficiency	Technological advances that increase fuel efficiency in vehicles and hybrid vehicles		
Alternative Fuels	Transition from gasoline to alternative fuels such as natural gas or methane		
E-Commerce Retail	With the advent of the Internet there is a reduced need to drive to stores to comparison shop		
E-Commerce Business-to-Business	Direct sales allows distribution of goods directly to consumer, so goods need only be in transit once		
Telecommuting	Working from home rather than the office, thereby avoiding travel during peak hours		
Work Force Participation	Dropping unemployment combined with growth in absolute number of jobs leads to more commuters		
Trip Chaining	Combining traditionally separate journeys into a single, more efficient trip		
GPS/Intelligent Signs	Onboard computer allows driver to avoid potential trouble spots, thereby decreasing trip time		
Automated Traffic Flow	Controlled speed and following distances of vehicles		

The estimates of displacement of future fuel use and corresponding fuel tax revenues were derived from work conducted by the Office of Transportation Technologies (OTT), U.S.

Department of Energy, "Quality Metrics." Evaluations are conducted on an annual basis in the U.S. DOE Office of Energy Efficiency and Renewable Energy (EE/RE) to assess the energy and environmental benefits potential of EE/RE programs that include the following:

- Technology Utilization: Compressed Natural Gas(CNG), EPACT (Alternative fuel term used by EPA), and Clean Cities Fleet Mandates
- Fuels Development: Ethanol used in flexible-fuel vehicles, dedicated vehicles, and fuel cell vehicles; and as contained in blends and extenders
- Advanced Automotive Technologies (Light Vehicles and Class 1 and 2 Trucks):
  - Electric Battery Vehicle R&D, including Zero Emission Vehicle (ZEV) mandates
  - Fuel Cell R&D: Gasoline vehicles with 2.1 times conventional vehicle fuel economy
  - Hybrid Vehicle Engine R&D: Advanced diesel vehicle with 1.35 and 1.4 (depending on vehicle category) times conventional vehicle fuel economy.
- Heavy Vehicle Technologies Truck (Classes 3 – 8)
- Advanced Materials
  - Propulsion System Materials: Ceramics
  - Light Vehicle Materials for electric, hybrid, and fuel cell vehicles
  - Heavy Vehicle Materials

Based on the fuel efficiencies and displacement of gasoline and diesel by alternative fuels that these technological applications and developments are expected to achieve between 2000 and 2020, FDOT will suffer decreases in fuel tax revenues. The following provides estimates of fuel tax revenue losses through 2020 for the three taxes levied at the state level:

- Lost State Fuel Sales Tax revenue - $1,490 million
- Lost SCETS Tax revenue - $840 million
- Lost State Fuel Tax for Local Use - $640 million

The KPMG analysis supporting these estimates of lost fuel tax revenues is provided in Appendix C. While the total lost fuel tax revenue may be substantial, most of the lost revenue occurs in the 2011 to 2020 time horizon. Between 2001 and 2010 lost fuel tax revenue is estimated at $370 million, with no lost revenue forecast other than a minor amount in 2004. The major revenue losses would be expected to occur in the longer time horizon of 2011 to 2020 where state fuel tax revenue losses could be $2.6 billion, if the technology adaptations and innovations analyzed by OTT are implemented and achieve market acceptance.

In addition to these fuel tax revenue losses, increased telecommuting will have a negative effect on fuel tax revenues through 2020. Using data from the USDOT report, Transportation

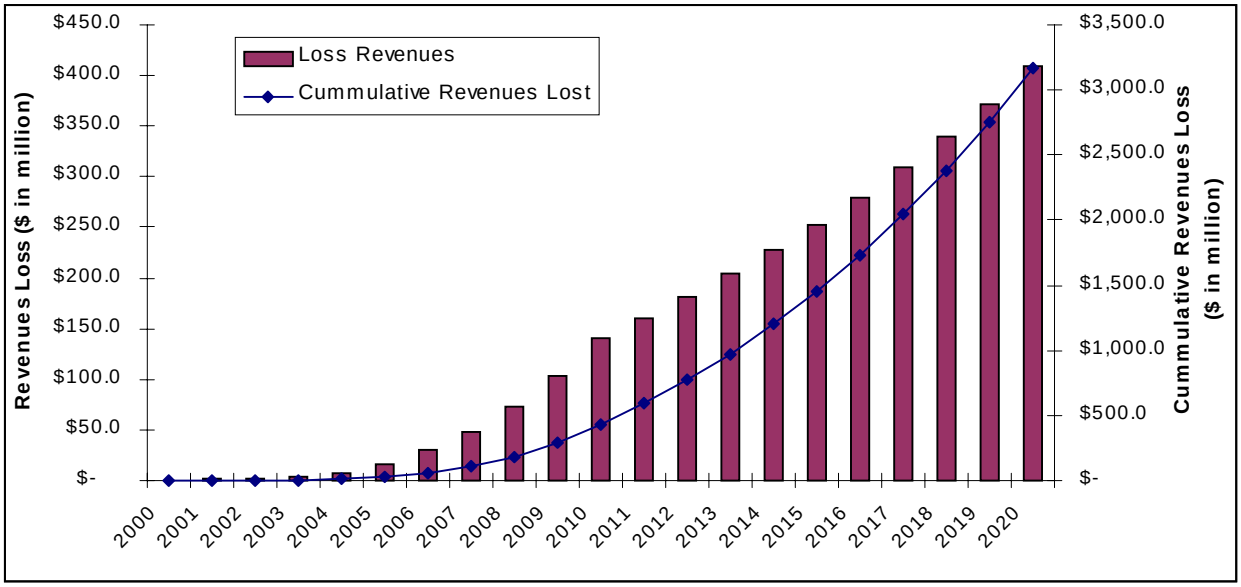
Implications of Telecommuting, it is expected that the number of employees that telecommute an average of two days per week will reach 1.3 million by 2020 in Florida.

These reductions in auto commuting translate to the following estimates of fuel tax revenue losses through 2020 for the three taxes levied at the state level.

- Lost State Fuel Sales Tax revenue - $99 million
- Lost SCETS Tax revenue - $54 million
- Lost State Fuel Tax for Local Use- $43 million

These potential fuel tax losses steadily increase with $60 million forecast in the 2001-2010 time frame to $136 million forecast in the 2011-2020 time frame. Exhibit 3-4 depicts the trend in potential state fuel tax losses on a yearly basis and shows the potential cumulative losses through year 2020.

Exhibit 3-4: Potential State Fuel Tax Revenue Losses



Source: KPMG estimate derived from the Office of Transportation Technology, U.S. DOE," Quality Metrics"

As shown in the exhibit, state fuel tax revenue losses could reach $3 billion by year 2020. The yearly values from 2004 to 2010 were estimated using a form of an "S" curve, which estimates increments to the percent reduction at a non-uniform rate. This accounts for time lags in the development and market acceptance of technology. From 2011 to 2020 it was assumed that reductions in fuel use would follow a uniform pattern of equal increments on a yearly basis.

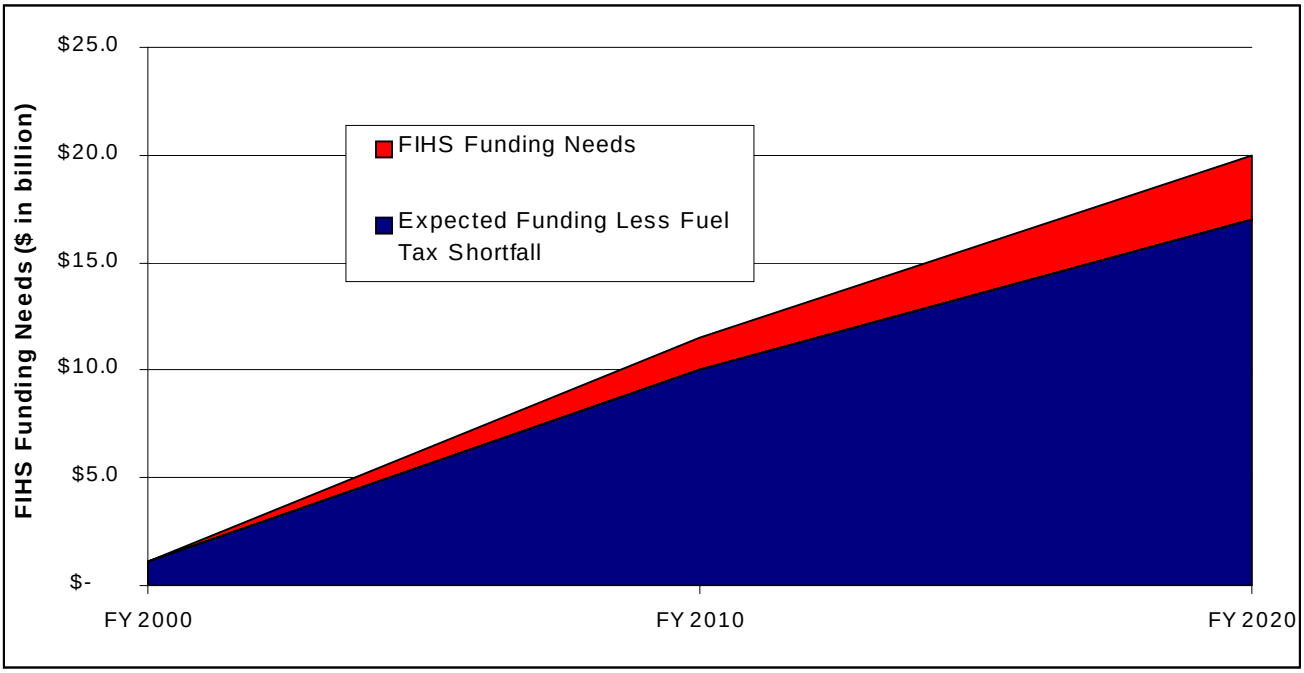
Exhibit 3-5 shows the relative impact of the fuel revenue loss on estimated funding through 2020. The potential revenue loss increases the funding gap from $29B to $32B. The shortfall of $29 billion is largely a result of programming without recognition of funding constraints. The projected shortfalls for funding the FIHS through year 2020 are beyond the traditional resources

available for transportation programs. Forecasted fuel tax revenues for 2000-01 developed by FDOT indicate that approximately $1.2 billion will be generated from the Highway Fuel Sales Tax and SCETS Tax.

For example, a 10 percent increase in these taxes (about 1 1/2-cents per gallon on gasoline) would generate an addition $120 million in revenue in 2000-01. Growing that revenue stream over twenty years at a 2 percent rate results in about $2.9 billion in increased revenue for the twenty year period extending to year 2020.

The potential fuel tax revenue losses of $3 billion present a different problem. Should these losses occur then the portion of the FIHS program for which funding is thought to be available through 2020 will be reduced by approximately 17 percent.

Exhibit 3-5: Fuel Revenue Loss Impact on Funding



3.6 RECOMMENDED STRATEGIES

While the fuel tax has been and will continue to be a large revenue generator in the immediate future, other opportunities for revenue generation exist. The funding strategies described below are intended to lessen the dependence on fuel tax revenues. This is not intended as a policy prescription for the short and immediate terms, instead it represents some strategic directions that should be considered for long term funding of the STTF focusing on continued implementation of the FIHS.

Recommendation 1: Evaluate the following revenue enhancement strategies as candidates for augmenting STTF revenues

The evaluation should be initiated with the assessment of expanding toll facilities, as this would provide the largest potential financial contribution for expanding the FIHS, and the implementation of an Express Lane and/or HOT Lane program in highly congested urban areas. All other revenue enhancement strategies, discussed below, should be assessed with regard to revenue potential (and cost savings) compared to the resources required for implementation.

Revenue Enhancement Strategy # 1: Expansion of Turnpike

Description: Systematic expansion of toll facilities and periodic toll rate increases to compensate for inflation.

Case studies: Infrastructure Management Group (IMG) Strategic Management Assessment & Privatization Study of Florida's Turnpike

Benefits: The state has the opportunity to capitalize on an existing asset and method of providing highway infrastructure based on user charges. This represents additional financial capacity beyond the funding generated from transportation related taxes, and imposing user fees on toll facility users in no way diminishes the revenue from these transportation related taxes, e.g., fuel taxes, registration fees, etc.

Costs: The costs are borne by toll facility users.

Applications: The expansion of the existing Turnpike system financed through tolls would provide funding for current capital project commitments and a variety of 20-Year Transportation System Plan (TSP) projects that include expansion of lane-miles, interchanges, access ramps, and ITS applications.

Revenue potential: With an enhanced Turnpike system under FDOT or operated as an independent Authority, toll revenues could support a $6.5 billion capital program through 2020. The $6.5 billion capital program reflects an increase of approximately $1.4 billion compared to the current projection under the base case (maintaining the Turnpike District under the current structure). This investment of $6.5 billion contributes to the expansion of the FIHS. The investment could increase the total Turnpike system from 1,701 lane miles to 2,321 lane miles, an increase of 36 percent.

Revenue Enhancement Strategy # 2: Value Pricing – High Occupancy Toll (HOT) Lanes

Description: HOT lanes are constructed adjacent to a free road and involve selling excess capacity that exists in a High Occupancy Vehicle (HOV) lane. Optional fees are paid by drivers of single-occupant-vehicles (SOV) to gain access to alternative road facilities providing a superior level of service and offering time savings compared to a free facility.

Case studies: HOT lanes have been implemented in California with construction of the SR-91 Express lanes in Orange County and the implementation of HOTs lanes on the I-15 HOV facility in San Diego Both facilities feature variable pricing, which is traffic sensitive for peak and off-peak travel. On a per-mile basis, peak tolls are the highest of any toll road facility in the country.

Benefits: HOT lanes utilize the excess capacity of HOV lanes, and variable pricing controls traffic volume to maintain acceptable service levels. The HOT lane thus serves a three-fold purpose: (1) preserving preferred travel facilities for HOVs; (2) generating additional revenue from tolls; (3) variable toll structure can serve as a Travel Demand Management tool. An additional benefit to the HOT lane users is the segregation from truck traffic.

Costs: HOT lanes need investment similar to toll road facilities. The concept of a HOT lane that also serves HOV traffic requires a physical separation of the HOT lanes from the adjacent free road. Experience in California indicates that monitoring "free" and tolled traffic leads to onerous administration costs, and current policies moved the toll exemptions for HOVs.

Applications: The implementation of HOT lanes would be most effective in multi-lane urban corridors with high levels of congestion. This would fulfill the criterion for variable tolls, where the HOT lane offered meaningful travel time-savings during peak travel.

Revenue potential: The 8-mile HOT lane facility in San Diego on I-15 generates approximately $8,000 per day in tolls based on a vehicle mix of 75 percent HOV, and 25 percent tolled vehicles. Based on a 250 days of revenue this equates to $2,000,000 per year or $250,000 per lane mile, with an average toll of approximately $2.00. The I-15 project cost less than $10 million to implement, largely because the two HOV lanes were in place and already separated from the mainline freeway, which consists of four lanes in each direction. Results for Florida would be largely dependent on the highway facilities in place, which would influence implementation costs, and traffic density, which would influence the ability to impose variable tolls at high per mile rates.

Revenue Enhancement Strategy # 3: Value Pricing – Express Lanes

Description: Express lanes are constructed adjacent to a free road and involve selling capacity created by adding a tolled facility. Fees are paid by drivers to gain access to alternative road facilities providing a superior level of service and offering time-savings compared to a free facility. There is no provision for mixing HOV and SOV traffic, toll schedules are developed based on vehicle size and classification and may involve variable tolling.

Case studies: Florida currently operates a number of tolled expansion projects that provide some indication of the revenue potential for implementing express lanes. The primary example of a facility that now is strictly an express lane facility is SR-91 in California, which discontinued free use by HOV vehicles in 1998, (HOV users, 3+ per vehicle, now receive a 50% discount).

Benefits: Express lanes provide additional capacity to adjacent free lanes, and variable pricing may be implemented to control traffic volume to maintain acceptable service levels and achieve revenue maximization. An additional benefit to the Express lane users can be the segregation from truck traffic. In comparison to HOT lanes, express lanes achieve: (1) increased revenue from charging all traffic; (2) avoid administrative and compliance costs associated with mixed HOV and SOV traffic; and (3) increase traffic diverted from free lanes through pricing strategies.

Costs: Express lanes need investment similar to toll road facilities. The concept of express lanes requires a physical separation of the express lanes from the adjacent free road.

Applications: The implementation of express lanes would be most effective in multi-lane urban corridors with high levels of congestion. This would fulfill the criterion for variable tolls, where the express lanes offered meaningful travel time-savings during peak travel.

Revenue potential: SR-91, which discontinued free use to HOV users in 1998, collected $20 million in tolls in 1998. Revenue potential from this example is $1 million per lane mile, or based on use approximately $2.15 per transaction, which amounts to a toll rate $.215 per mile. This is a variable toll facility, where toll levels are used to maintain level of service. The capital cost of the facility was $131.8 million. The potential for Florida is largely related to congestion on free facilities which will both create sufficient traffic density on express lanes and command toll rates per mile which are among the highest in the nation.

Revenue Enhancement Strategy # 4: Shadow Tolls

Description: The concept of shadow tolls is linked to private implementation of highway facilities, whereby the shadow tolls represent revenues paid by a third party (usually a governmental entity) to an operator of a facility based on traffic volume. The shadow tolls attempt to replicate explicit toll charges based on traffic counts along a specific facility. Shadow tolls are usually implemented in conjunction with a public/private venture i.e., a design-build-operate-maintain (DBOM) contract.

Case studies: Shadow toll facilities have been implemented in Canada, United Kingdom and Finland. FDOT operates two shadow toll facilities that serve Pro Player Stadium and Broward Arena. The FDOT applications are special purpose facilities that are used only in conjunction with events at the two stadiums. Payments for the shadow tolls are borne by the users through the charge for parking.

Benefits: The innovative procurement structure (DBOM) shifts substantial risk to the private sector. The fact that a private entity builds, operates, and maintains the facility adds road capacity through private investment, replacing public capital. The procurement arrangement, which encompasses DBOM generates efficiency gains and leads to facilities that are implemented recognizing life-cycle costs.

Costs: The financial burden for paying the shadow tolls is shifted to the STTF rather than facility users. Implementing a facility using shadow tolls rather than a user pay toll facility results in lost toll revenue.
A shadow toll facility may be financed to some extent through value capture funding sources generated from non-users who benefit from the transportation investment, which include the following:

- Transportation development district income
- Developer fees or recurring charges
- Land banking proceeds (in the vicinity of interchanges/access points)
- Tax increment financing
- Special tax assessments (benefit assessment district, increments to parking fees)

These sources of funds are used to lessen reliance on STTF revenues.

Applications: These types of facilities could be developed in conjunction with an expanded toll road system. The DBOM procurement and shadow toll reimbursement scheme would be implemented to develop free roads that provide the alternative to the tolled facilities. Shadow tolls could be used as a transportation demand management strategy whereby FDOT would make payments to a toll facility for reductions in toll rates to encourage diversion of traffic from adjacent free roads that were operating over capacity. This arrangement would distribute traffic and besides benefiting road users would delay capital expansion requirements, e.g., lane widening on free facilities.

Revenue potential: The revenue potential, based strictly on a timing issue relates to the acceleration in project implementation, which reduces the necessity of public (FDOT) investment. Any revenue generated would be highly dependent on identifying projects in growth corridors where development potential and risk level for development projects provide the conditions for employing value capture revenue strategies.

Revenue Enhancement Strategy # 5: Naming Rights

Description: Naming rights entails the selling of the “rights” to name a public facility (e.g., toll road). Naming rights have migrated from sports stadiums and arenas to performing arts centers. The latest application is a shopping mall, which has been named by a credit card company.

Case studies: Naming rights deals exceed $1 billion and have expanded from major sports venues to colleges and minor league sports. In Florida, the following table summarizes some major naming rights deals.

Team	Facility Name	Duration	Est. Value
Miami Dolphins	Pro Player Stadium	10 years	$20 million
Tampa Bay Buccaneers	Houlihan's Stadium	5 years	$10 million
Tampa Bay Devil Rays	Tropicana Field	30 years	$46 million

Source: Naming Rights Deals, Team Marketing Report, Inc. Deloitte & Touche LLP, 1997

FDOT, through the Turnpike, currently receives an in-kind contribution from a cleaning supply company for letting the company post its logo within Turnpike concession facilities.

Benefits: A naming rights deal represents a type of contractually obligated income that provides a facility with revenue stability and predictability in debt service.

Costs: None. Presumably any entity that purchased naming rights would assume the financial responsibility for installing signage or other media for promotion purposes. Safety is a major issue with regard to naming rights that lead to promotional media along the roadway, which add to distractions to the road users.

Application: Naming rights could be extended to highway corridors, toll plazas, and concession areas. Factors that influence the value of a naming rights deal to the purchaser specifically are:

- Number of impressions or exposures
- Sponsorship and cross-promotion opportunities
- Tax deductible expense
- Brand exclusivity
- Public relations and community image
- Related amenities

Revenue potential: Naming rights could be a revenue source for defraying a modest amount of operations and maintenance expenses. This would not be a revenue generator to support a corridor capital investment program. The analogous data from the estimated value of naming rights for sports stadiums indicate that naming rights represent a small portion of total facility costs. Stadium costs run into the hundreds of millions dollars, naming rights on a yearly basis are in the $1-$2 million range.

Revenue Enhancement Strategy # 6: Joint Development– Resource Leveraging

Description: The cost sharing or leasing of public assets with private entities for contractual payments, shared revenues or in-kind payments.

Case studies: Leasing of air space and ground rents, leasing of right-of-way. In Florida, the Cypress Creek park-n-ride is being redeveloped as a mixed-use development project.

Benefits: Adaptive use of existing assets to generate direct revenue and indirect revenue (e.g., direct income from leases and property tax revenue from real estate development created on air rights).

Costs: Requires a unit within FDOT to inventory department assets, provide asset valuation, determine potential private sector applications, administer an application process, conduct negotiations, and enter into contracts. This may require legislative authority.

Application: Right of way leases for communications and utilities have already been executed by FDOT through the Loadstar contract. The other major potentials involve air rights and ground leases at highway access points and at fixed guideway transit stations. These are not large revenue generating strategies.

Revenue potential: A joint development program implemented by the Washington Metropolitan Transportation Authority (WMATA) has generated up to $7.0 million per year in revenue from air rights leases. To place this in perspective the asset base of WMATA exceeds $10.0 billion.

Revenue Enhancement Strategy # 7: Asset Management – Infrastructure Preservation

Description: A broad definition of asset management involves life-cycle costing leading to asset preservation to eliminate more expensive replacement costs.

Case studies: Long-term build and maintain contracts, which contain road condition specifications.

Benefits: An infrastructure management strategy focusing on system preservation rather than routine maintenance and replacement offers substantial life-cycle cost savings.

Costs: Financial benefits are generated in the out-years of the infrastructure useful life. Initial costs may be higher, since the objective is economy over the life of the asset, not procuring an asset strictly on the basis of low bid.

Application: Requires shifting management focus to system preservation, which places increased reliance on DBOM contractual arrangements, featuring long-term maintenance contracts that specify acceptable road conditions. If road condition specifications are not met, the DBOM contractor is responsible for remedies leading to system preservation.

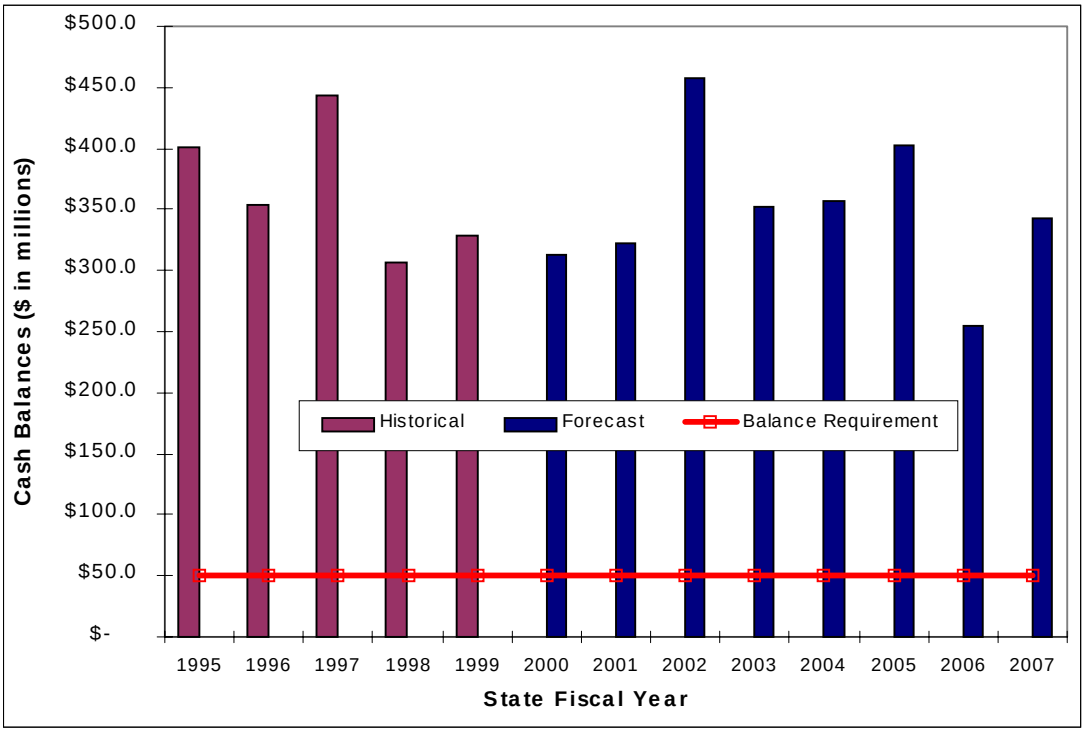
Revenue potential: Does not generate revenue. Cost savings occur in the future, and the largest costs savings would occur beyond 2020, when preservation focus eliminates the necessity to replace infrastructure.

Revenue Enhancement Strategy # 8: Cash Management

Description: Cash management is not a revenue enhancement strategy per se; however, efficient cash management could allow FDOT to expedite important highway projects. FDOT is required to maintain a minimum cash balance of $50 million in accordance with Florida Statutes, Section 339.135(6)(b). Cash management is important, because while FDOT operates under a commitment budget, actual expenditures will occur in different months and even different years beyond the legislative commitment. Cash balances are therefore essential for the FDOT to meet its contractual obligations.

Exhibit 3-6 provides the actual and forecast of FDOT's average monthly cash balances for fiscal years 1994-95 through 2006-07.

Exhibit 3-6: Average Monthly Cash Balance (1995-2007)



Source: Office of Financial Management, Comptroller's Office

As indicated above, during the past five fiscal years, the average monthly cash balance has been approximately $366 million – far exceeding Florida Statutes requirement of maintaining a minimum cash balance of $50 million. Additionally, the cash balance is forecasted to be significantly higher than the minimum balance requirement during the next several fiscal years. Spending down these cash balances could provide a one-time stimulus for project acceleration.

Case Studies: N.A.

Benefits: Keeping excess cash at a minimum results in improved effectiveness with regard to delivering the FDOT program. Excess cash can be combined with other funding sources to leverage project value.

Costs: Keeping excess cash at a minimum requires careful monitoring of projects in regard to reimbursements. In the event FDOT experiences a cash shortfall, the Legislature can arrange a temporary transfer of funds within the State Treasury to meet temporary deficiencies (Florida Statutes, Section 218.18).

Application: Excess cash could be applied to any programmatic area under FDOT.

Revenue potential: This will not generate additional revenue. It consists of a one-time action to spend down excess cash to achieve project acceleration and potentially leverage greater project value when combined with other funding sources.

Revenue Enhancement Strategy # 9: Weight-Distance Tax

Description: The funding strategies available to FDOT, other than the major expansion of tolled facilities, do not generate sufficient revenue to counter the downside risk in future fuel tax revenues. Nor do these strategies significantly contribute to closing the funding shortfall gap for the continued development of the FIHS through year 2020. A major source of funding in the future is likely to be a weight-distance tax based on:

- Vehicle size
- Mileage traveled
- Peak/off-peak facility use

This type of tax can be implemented when Intelligent Transportation Systems (ITS) are in place from both the perspective of the highway infrastructure and vehicle interface technology.

Case studies: N/A

Benefits: Recent advances in technology have made it possible to introduce a weight-distance tax based on vehicle size, mileage traveled and peak/off-peak facility use. A weight-distance tax could provide additional revenues to large and economically important states, such as Florida.

Costs: Implementation of a weight-distance tax would require support and coordination from all state transportation agencies across the nation. Additionally, compatibility of ITS applications and network would be the key requirement for such a tax to be feasible.

Application: Some of the evolving technology and behavior impacts are predicted to have a negative effect on gasoline (and diesel) fuel consumption, which will ultimately lead to declining fuel tax revenues. The issue then becomes, "how do we raise revenues from behaviors that still use the highway infrastructure but have a decreased reliance on gasoline and diesel fuels?" The obvious alternatives are to tax alternative fuel vehicles directly and tax alternative fuels through some type of consumption tax, based on BTU value. While these actions would have some positive impact on revenues, these demand-side responses could have adverse effects on the major public policy objectives of promoting clean air, reducing reliance on foreign sources of fuels, and fostering technological innovations and applications. A weight-distance tax would address some of these concerns.

Revenue potential: A weight-distance tax has a potential to reducing the funding gap. This revenue enhancement strategy should be further evaluated to determine the revenue potential.

* *

The project team recommends that the revenue enhancement strategies discussed above should be further evaluated based on the following issues and criteria:

- Revenue yield
  - Timing of revenue flows
  - Stability of revenue flows
  - Growth potential
  - Response to inflation
- Public acceptance
  - Equity
  - Incentive and distortion effects on the state and regional economies
  - Benchmarking with other states
- Legal/Regulatory
  - Required enabling legislation
  - Regulatory authorization
- Administrative/Institutional

- Revenue assessment and collection mechanisms
- Evasion/avoidance potential

Recommendation 2: Establish a threshold for supporting funding needs for the non-highway modes through STTF

Presently, the Florida Statutes requires that FDOT allocate a minimum of 15 percent of its annual budget appropriation for public transportation. Unlike, highway funding needs, other transportation modes such as transit, rail, aviation, seaports and intermodal have dedicated revenue sources to fund their operations. A referendum passed in the latest election regarding high-speed rail may require substantial investment, which potentially could drain needed funding away from the highway projects.

Transit systems are primarily supported by local effort and Federal new start funds. Aviation has reliable funding sources from passenger facility charges, user fees, concessions, and parking. Seaports have a series of user fees applied to vessels, cargo and passengers. Intercity rail prospects for enhanced funding are closely linked to the arrangements between the Federal government and Amtrak. Whether FDOT through the STTF has the lead or support role with regard to programming and financing projects, it is clear that the shortfalls identified in this chapter may not be funded. The recognition of a shortfall in the planning process in no way assumes that the funding will be provided through raising existing taxes and/or user fees, or implementing new taxes and/or user fees.

The project team recommends that the STTF should be used in a support role to provide limited grant and loan programs for the non-highway modes, with an established percentage allocation for public transportation. Financial support should provide gap funding for project implementation/acceleration.

Recommendation 3: Planning process should take into consideration expected available funding for the planned expansion of the FIHS

The planning process for the FIHS is driven by the objectives to; enhance mobility, provide for safety, and further economic development. This is a sensible planning perspective. The planning; however, is conducted without recognition of funding constraints. Additionally, the planning process does not identify what potential impacts the lack of funding would have on the State Highway System. While it is prudent to entertain more projects than can be funded, since some projects may be delayed and thus others can be moved forward, the current practice of forecasting a shortfall far in excess of planned expenditures does not help the program planning and implementation process. In fact may reflect poorly on FDOT with regard to a perception that the plan for the FIHS consists of a wish list of projects, with more projects placed in the shortfall category, than those that ultimately will be programmed.

The project team recommends that FDOT's planning process should take into consideration expected available funding for the planned expansion of the FIHS.

4. PROJECT DEVELOPMENT AND DELIVERY

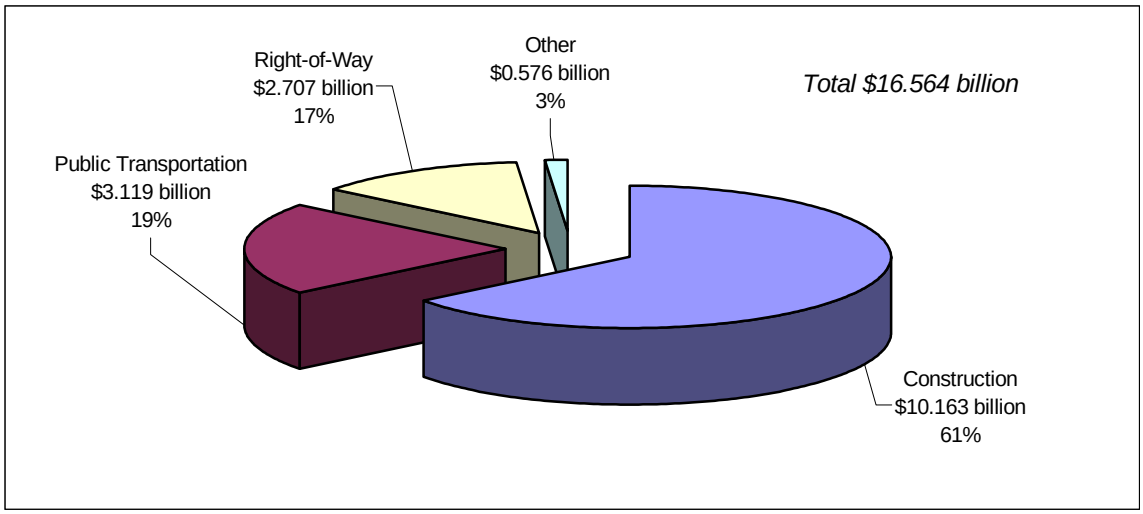
This chapter presents an overview of the processes, technology and personnel resources used by FDOT to develop and deliver its capital projects. This chapter also includes an analysis of current trends and issues and a presentation of KPMG's recommendations for further improving FDOT's project management capabilities.

4.1 INTRODUCTION

Between 2000-2005, FDOT plans to commit over $16.56 billion to buy right-of-way and fund construction for thousands of transportation improvement projects or project phases identified in the Department's Five-Year Work Program. Projects vary widely in complexity – from simple culvert replacements to the construction of new highways and public transportation facilities. FDOT will spend an additional $4.97 billion to fund activities that directly support these improvements – preliminary engineering, right-of-way support and environmental mitigation activities, and construction engineering and inspection.[1]

Exhibits 4-1 and 4-2 summarize the budget amounts and functions in each program category.

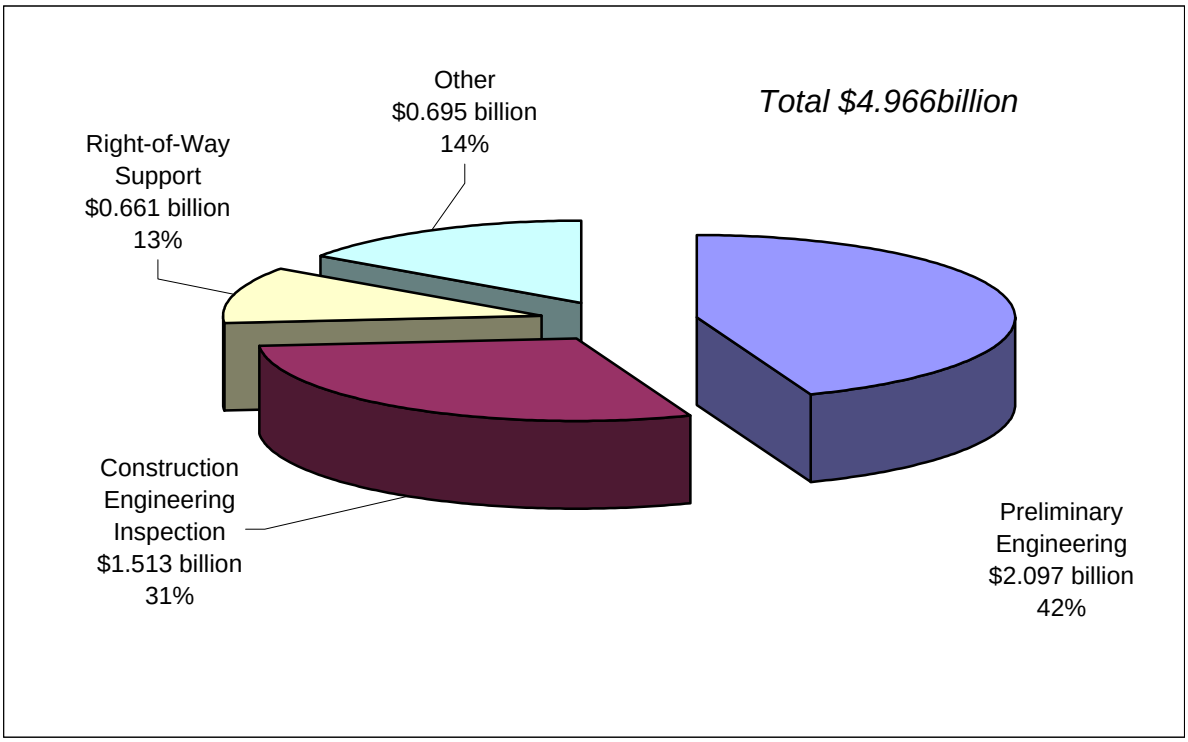
Exhibit 4-1: FDOT 5-Year Work Program – Proposed Product Component



Source: FDOT 5-Year Adopted Work Program, FY 2000/01-2004/05

[1] Florida Department of Transportation Program and Resource Plans for FY 1999/2000 through 2004/2005

Exhibit 4-2: FDOT 5-Year Work Program – Proposed Product Support Component



Source: FDOT 5-Year Adopted Work Program, FY 2000/01-2004/05

The Department follows prescribed project development and delivery processes to ensure that proposed improvements are planned, designed and constructed in accordance with state and federal policy, regulation and statute. These requirements, as summarized in the following section, provide the framework for public involvement, environmental review, design standards, eminent domain, construction contract administration and other related functions.

4.2 PROJECT DEVELOPMENT AND DELIVERY CYCLE

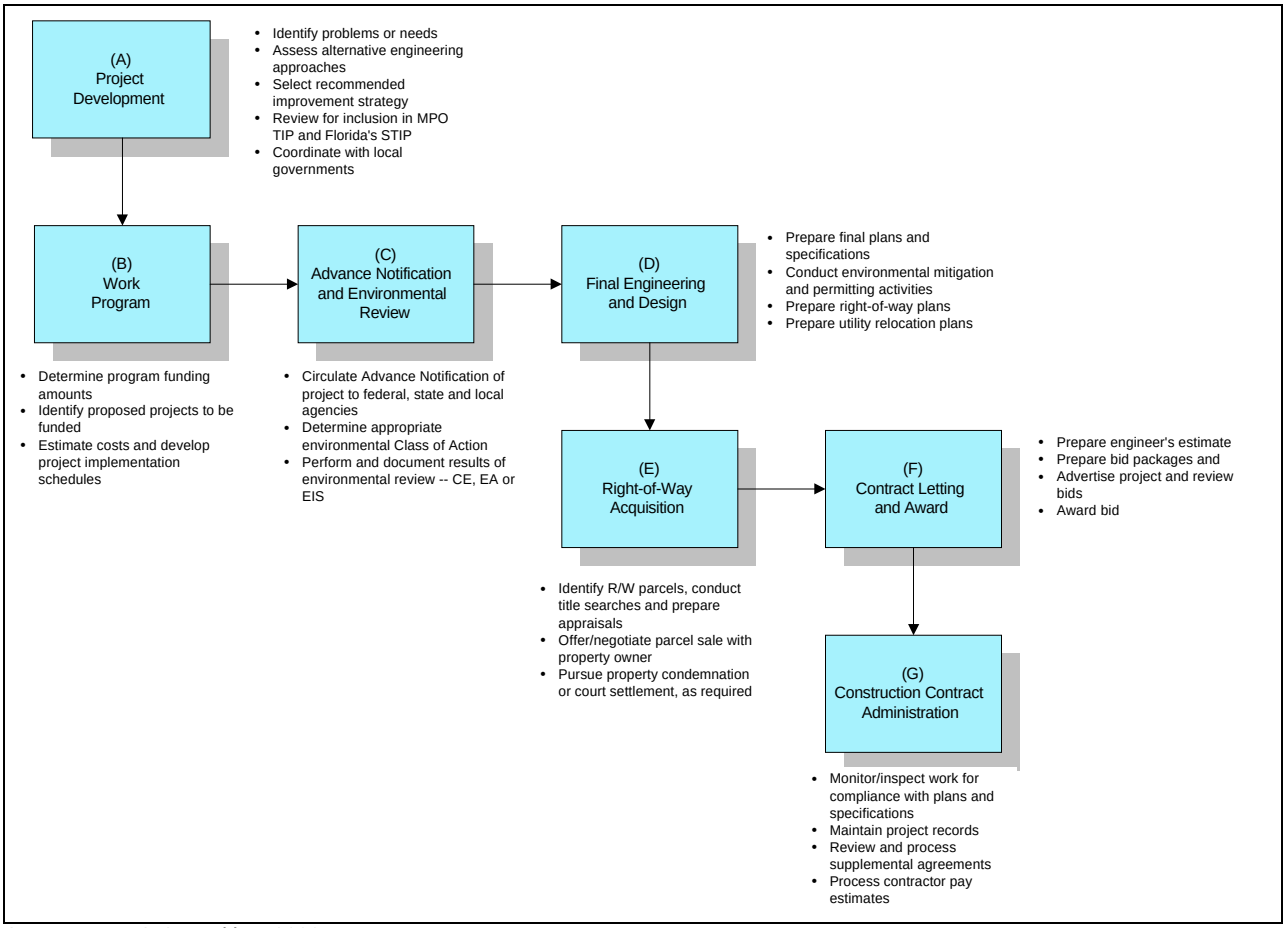
The project development and delivery process summarized in this section is structured to accommodate the authorization phases required for federal funding. FDOT uses this approach for all projects – including those programmed with 100-percent state funds. A high-level schematic presentation of this process is shown in Exhibit 4-3.

A. Project Development. In the project development phase, FDOT evaluates specific transportation needs or problems (e.g., high accident locations, routes with high volume-to-capacity ratios, structurally deficient or functionally obsolete bridges, etc.), community impacts, environmental impacts, assesses alternative engineering improvement strategies, coordinates with public and local governments, and recommends projects that will address stated improvement needs. In urban areas, FDOT projects must also be reviewed and approved by the appropriate Metropolitan Planning Organizations (MPO's) and included in the MPO's Transportation Improvement Program (TIP). Projects included in the MPO TIP are sent to FDOT for inclusion in the State Transportation Improvement Program (STIP). Ultimately, projects in the STIP are incorporated into Florida's Five-Year Transportation Work Program.

***B. Work Program Development*.** FDOT is required to develop and maintain a Five-Year Work Program, documenting the specific transportation activities and improvements the Department plans to implement to meet the objectives and priorities of the Florida Transportation Plan (FTP).[2] The Work Program also takes into account anticipated state and federal revenues and fund allocations and presents proposed schedules and budgets for each project planned in a given fiscal year.

Each year, the Department updates its Work Program through a comprehensive, collaborative and inclusive process carried out by the District offices, working closely with Metropolitan Planning Organizations and local governments. The Department also receives input on proposed projects through public hearings, the Florida Legislature and the Governor's Office. Through automation, FDOT has greatly improved its ability to manage this complex process. The Department has developed a Work Program Administration (WPA) system – a subsystem of FDOT's Financial Management System (FMS) – to facilitate the process of developing, modifying and monitoring its program.

Exhibit 4-3: High-Level Schematic of Capital Project Development and Delivery Process



Source: KPMG Consulting, 2000

[2] Florida Statutes, Section 339.135

C. Advance Notification and Environmental Review. At the beginning of the Preliminary Engineering Phase, FDOT notifies appropriate federal, state and local agencies of its intention to proceed with a specific project identified in the Department's Work Program. After it has addressed comments and potential conflicts raised in this Advance Notification process, FDOT evaluates and documents potential environmental impacts associated with the proposed project. This environmental review is guided by requirements defined in the National Environmental Policy Act (NEPA). Three classes of action prescribe the level of review and documentation required by NEPA:

- Environmental Impact Statements (EIS). Actions that will significantly alter or effect the environment are processed as an EIS. The proposed construction of a new highway alignment or a new fixed rail transit facility would typically require an EIS. The final review and approval of an EIS by the Federal Highway Administration (FHWA) results in a Record of Decision (ROD).

- Environmental Assessment (EA). When the environmental impact for a proposed improvement is not clearly established, the project is classified as an EA. The construction of a new highway interchange or the major widening of an existing highway might be classified as an EA. Final review and approval of the EA by the FHWA results in a Finding of No Significant Impact (FONSI).

- Categorical Exclusion (CE). Actions presenting little or no significant environmental impact may be classified as CE's. Highway resurfacing or bridge rehabilitation projects are examples of projects that would typically be classified as a CE. To obtain clearance from the FHWA for a CE, the FDOT must demonstrate that the specific conditions or criteria for a CE (as defined in FHWA regulatory and policy documents) are satisfied and that environmental impacts are minimal.

NEPA requires public participation in the review and approval of all projects classified as an EIS or EA. Specific requirements are defined by the state DOT and approved by the FHWA. Although federal policy and regulations do not require public involvement for the approval of a CE, FDOT policy does.

D. Final Engineering and Design. Once FHWA has approved the environmental documentation applicable to a particular project, the Department receives funding authorization to begin final engineering and design. During this phase of project development, FDOT staff and its consultants prepare final design plans and specifications, develop final right-of-way and utility relocation plans, and conduct environmental mitigation and permitting activities prescribed in the NEPA process.

E. Right-of-Way Acquisition. Using right-of-way plans developed in the Final Engineering and Design phase, FDOT staff and/or its consultants determine which parcels are to be acquired and conduct title searches to identify parcel owners. The Department then develops appraisals to determine the fair market value of these parcels and makes compensatory offers to each property owner. If FDOT and the property owner can not reach an equitable settlement price for the parcel, the Department submits an Order of Taking, a legal filing that initiates the

Condemnation Process. Condemnation is the means by which FDOT acquires the parcel via the state's eminent domain authority. Once the Department acquires title to all parcels required for a particular project, it certifies this status to the FHWA.

F. Contract Letting and Award. Once final plans and specifications are prepared, environmental permits secured, and right-of-way property acquired, the Department solicits and reviews bids for construction services. This phase entails developing the Department's official estimate, preparing a bid package, advertising for construction services and reviewing bids received. Typically, construction contracts are awarded to the firm submitting the lowest responsible bid. In selected alternative bidding methods, the Department may award the contract based on the evaluation criteria established under the alternative/innovative contracting methods (e.g., cost and time, lump sum, bid-average-method, design-build, etc.).

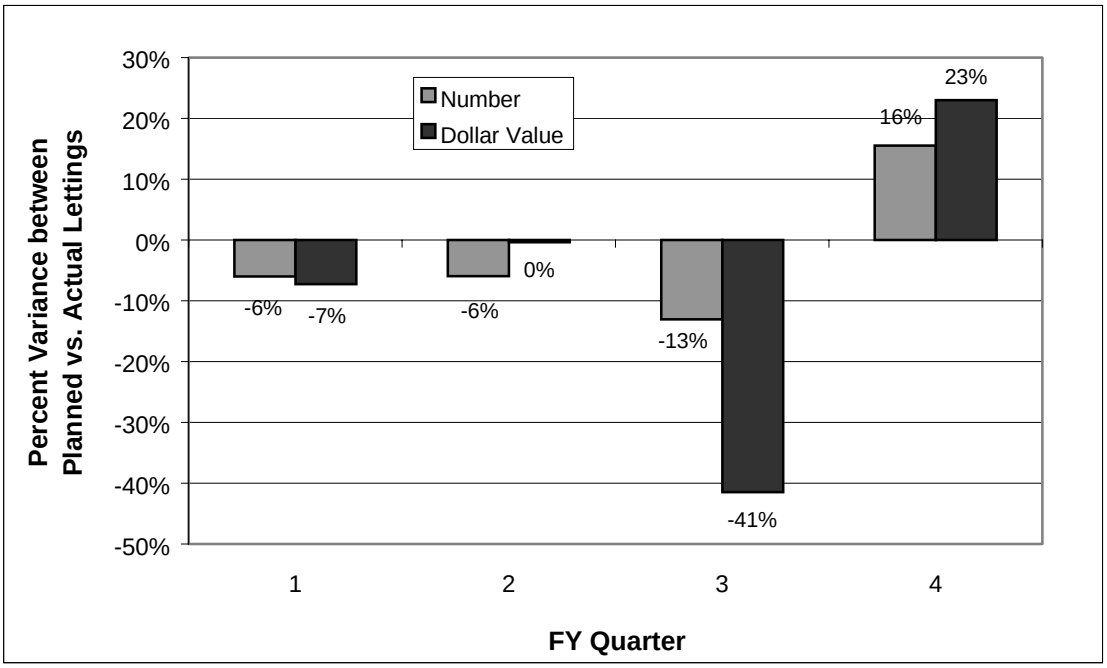
G. Construction Contract Administration. The selected construction contractor builds the transportation project using plans and specifications developed during final engineering. FDOT staff and consultant construction engineering inspection (CEI) staff administer the project – monitoring and inspecting construction contract work for compliance with plans and specifications, maintaining project records, processing supplemental agreements and developing estimates for payment to the contractor.

4.3 SITUATION ANALYSIS

The annual construction element of Florida's Transportation Work Program contains over $2.0 billion in highway and public transportation improvements that must be planned, designed and constructed to meet defined schedules and budgets. Projects vary widely in complexity. A simple culvert replacement project might cost only $50,000 and take less than two years to design and construct, while a new multi-lane highway or major river crossing might cost over $50 million and take 8-10 years to implement. Managing a multi-year program with thousands of complex projects in various stages of development requires sophisticated project management capabilities. While FDOT is successful in meeting its annual plan production and contract letting goals, there are opportunities to improve the efficiency of program and project management processes, systems and skills.

By plan, in terms of project dollar value, nearly two-thirds of FDOT's lettings are scheduled for award in the 3rd and 4th quarter of each year. Executing such a large percentage of the Department's annual program in the last half of the year creates workload imbalances and scheduling conflicts. Weaknesses in FDOT's program and project scheduling capabilities are evident in the data presented in Exhibits 4-4 and 4-5. Exhibit 4-4 shows the percentage difference between projects scheduled vs. awarded in each quarter of the fiscal year – in terms of total projects and total project dollar value. This data indicates that FDOT consistently failed to meet its letting goals for the 3rd quarter of each fiscal year – on average it awarded only 59 percent of the projects it had scheduled for this period. To meet its annual production goals in spite of this 3rd quarter shortfall, the Department awarded more projects than planned in the 4th quarter of each year (note that this data does not include contracts added that were not originally in the Department's letting plan).

Exhibit 4-4: Percentage of Projects Planned vs. Let to Contract by Quarter, FY 1997/98 through 1999/00



Source: FDOT Project Letting Data, FY 1997/98 through 1999/00

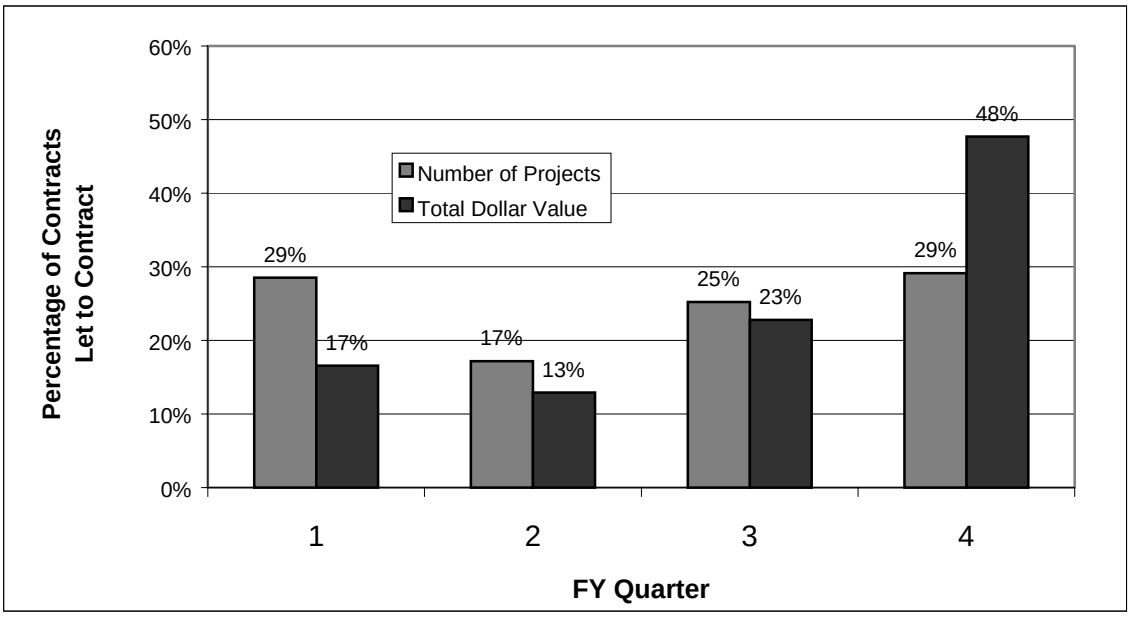
Exhibit 4-5 presents the average number and dollar value of projects that FDOT let to contract by quarter for the period FY 1997/98 through 1999/00.

In analyzing this data, it appears that projects scheduled for award in the 3rd quarter were included in the 4th quarter letting schedule to meet the Department's annual production goals. Exhibit 4-4 confirms this assumption. As a result, the volume of projects let to contract in the final quarter – over 48 percent by dollar value – is notably disproportionate to the volume of projects awarded in the first three quarters of the year. By concentrating such a high percentage of the Department's total capital program in one quarter, FDOT may be inviting some unintended problems, including:

- Fewer contractors to bid on work
- Higher initial contract costs
- Higher FDOT and consultant CEI costs incurred to cover multiple simultaneous projects
- Higher potential for construction time and cost adjustments

Current data presented by the Department does not indicate that this 4th quarter surge in project lettings is quantifiably impacting project quality or costs. However, if this quarterly letting imbalance is not addressed, the potential for these cost and quality repercussions will grow as FDOT's work program increases and in-house staffing decreases. FDOT is taking steps to capture better metrics on cost and time overruns. Application of these metrics to the planning and management process could help continue a trend of reducing time overruns and provide a tool for managing and reducing cost overruns.

Exhibit 4-5: Summary of FDOT Projects Awarded – FY 1997/98 through 1999/00

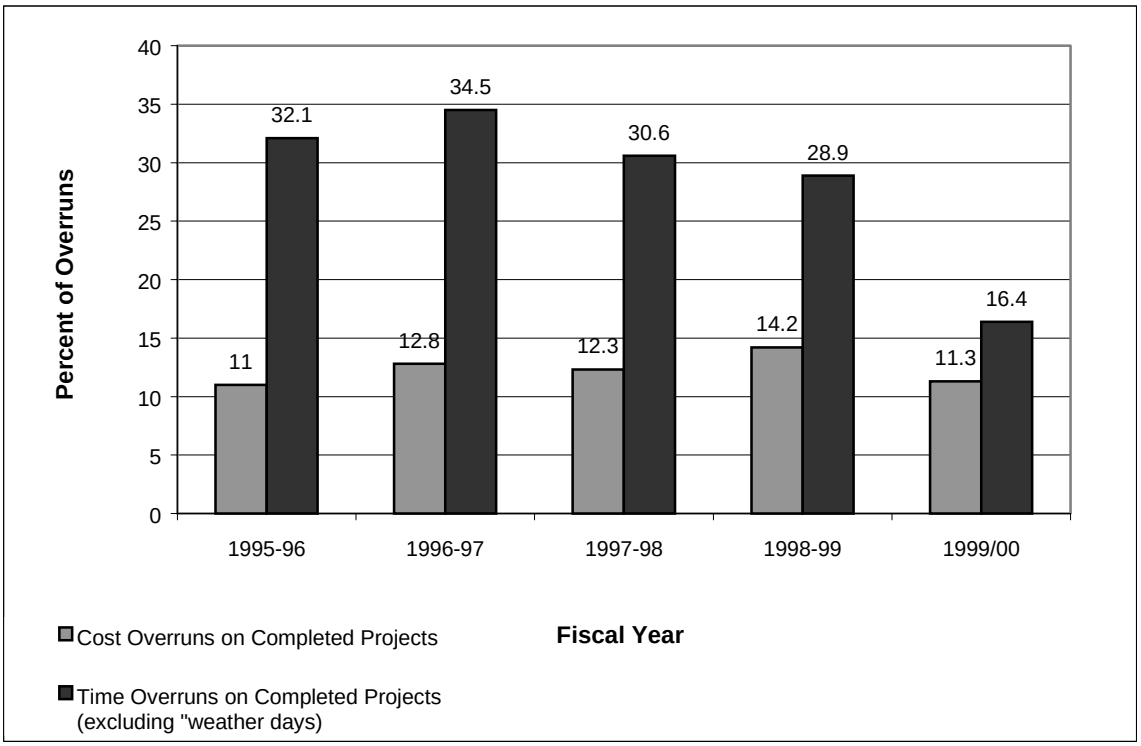


Source: FDOT Project Letting Data, SFY 1997/98 through 1999/00

Exhibit 4-6 presents a summary of cost and time overruns on construction projects completed by the Department between FY 1995/96 through 1999/00. This data highlights the Department's difficulty in completing projects on time and within budget. In its 2020 Florida Transportation Plan, FDOT justifies some of these delays and added costs by asserting that "most changes are unavoidable and almost all add value to the project".[3] Yet, as Exhibit 4-7 and 4-8 shows, nearly 36 percent of the time delays on FDOT construction projects (Supplemental Agreement Days) and 44 percent of the cost increases (Supplemental Agreement Amount) are attributable to modifications to plans and specifications – activities that are clearly within the project engineer's realm of control. Arguably, most of the other factors – including utility delays, claims, CEI action or inaction, and changed field conditions – are also within the project's engineer's control to varying degrees.

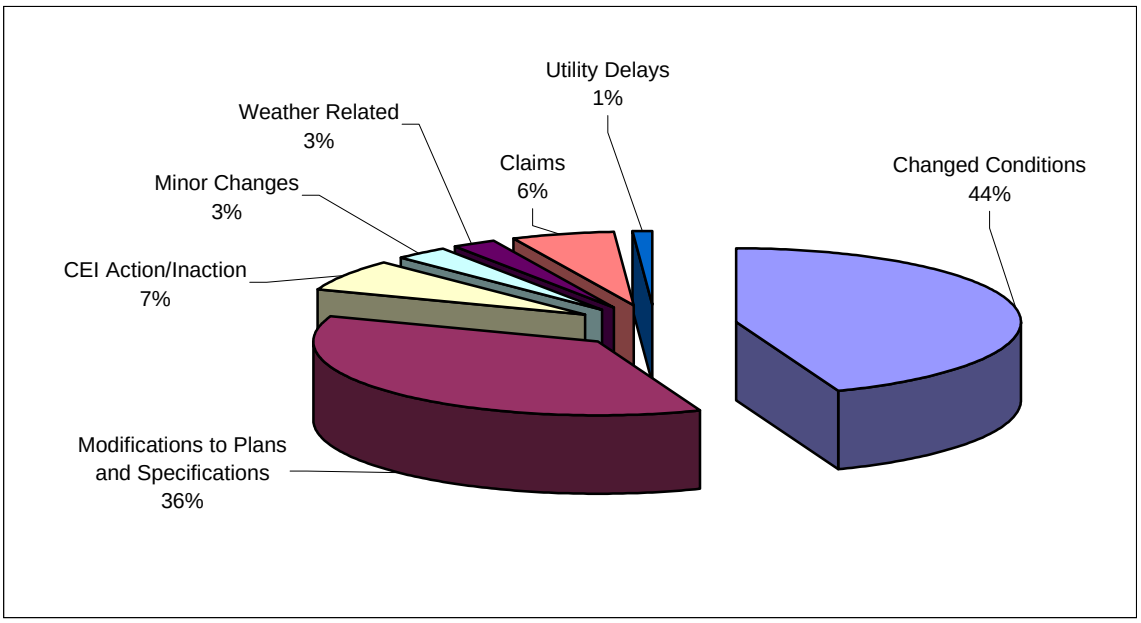
[3] 2020 Florida Transportation Plan – 2000 Short Range Component

Exhibit 4-6: Cost and Time Overruns on Completed FDOT Construction Projects



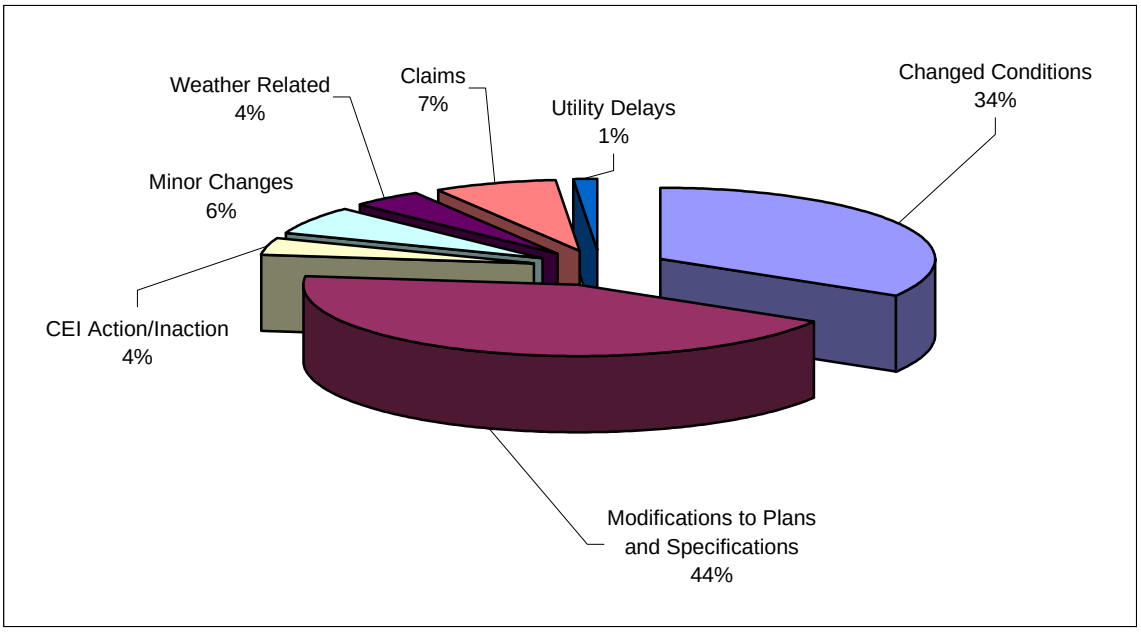
Source: Florida Transportation Commission

Exhibit 4-7: Cause of Supplemental Agreement Days on FDOT Construction Projects, Completed in FY 1999/00



Source: Florida Transportation Commission

Exhibit 4-8: Cause of Supplemental Agreement Amount on FDOT Construction Projects, Completed in FY 1999/00



Source: Florida Transportation Commission

4.3.1. Program and Project Management – Process Issues

Time delays and cost increases on FDOT projects appear to be rooted in the Department's program and project management practices. FDOT has not developed a consistent statewide methodology for developing project budget estimates and schedules. Most of the Department's Project Development and Environmental (PDE) staff reportedly use historic or anecdotal data to develop budgets. Typically, FDOT calculates the preliminary engineering budget for a project as a percentage of the estimated capital construction cost – which itself is only a parametric figure. Rarely do FDOT project managers develop a detailed Work Breakdown Structure (WBS) – which can be used to develop cost and schedule estimates for a project based on specific activities and team member work assignments.

Although FDOT closely monitors its consultant contracts for compliance with agreed schedules and budgets, it does not regularly track budgeted vs. actual hours and costs for its own planning, preliminary engineering or construction engineering and inspection functions. Nor does it track its own hours and costs for administering consultant contracts. The Department must develop and track its budget estimates in these phases – this cost control metric is an important measure of how efficient and effective the organization is performing. Additionally, FDOT needs accurate information on the hours and costs required to manage its own projects to fairly negotiate hours and cost extensions for its consultant contracts.

4.3.2. Program and Project Management – Systems Issues

As shown in Exhibit 4-9, FDOT Districts use a variety of desktop software applications to monitor schedules for implementing proposed improvements. The Department has not adopted any statewide standard project management software application. Once each month, Districts send project schedule updates from these various applications to the Multi-Project Scheduling (MPS) System – a mainframe program in Tallahassee. This action involves collecting project information from District PDE staff and uploading these files to the MPS, using custom-coded programs. The MPS generates standard reports used by FDOT staff in Central Office and in the Districts to monitor and report work program and project schedule status. Project cost data is collected via time sheets, expense reports and consultant invoice payments and recorded in the Department's Financial Management System (FMS). Project engineers can retrieve this cost information by viewing on-line reports generated by the Project Cost Management (PCM) Subsystem in FMS.

Exhibit 4-9: Software Applications used by FDOT Districts to Manage Capital Projects

District	Software Used to Manage Projects
1	Primavera
2	MS Excel
3	Primavera
4	Primavera
5	Primavera
6	MS Project
7	Primavera, SureTrak, Fox Pro
Turnpike	Primavera, SureTrak, MS Project

Source: KPMG Survey of FDOT District Staff, 2000

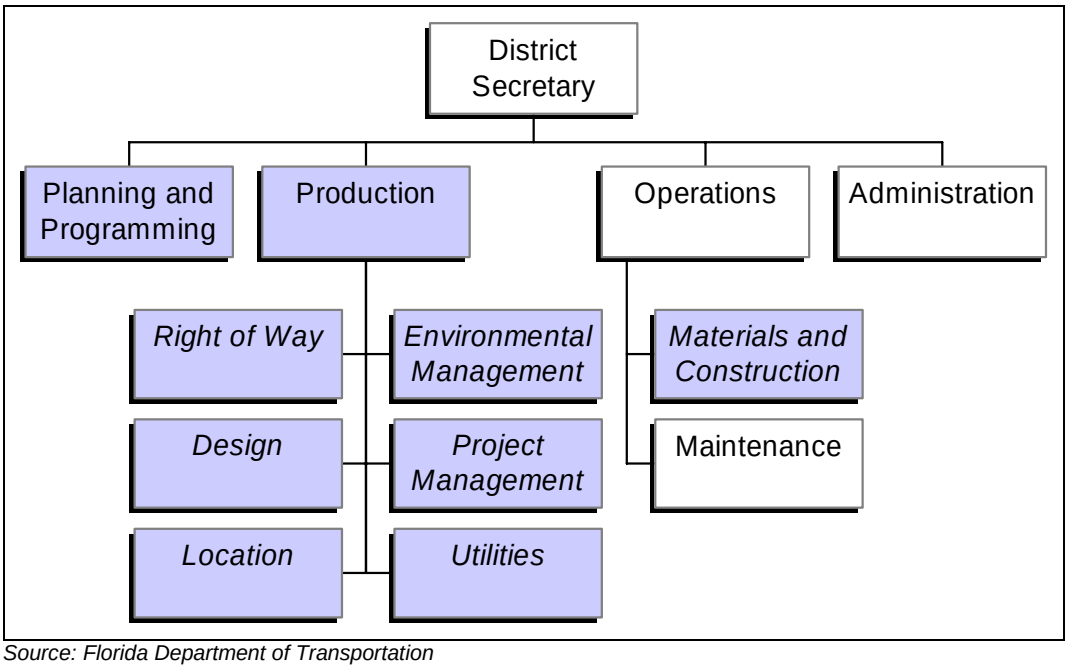
Although FDOT uses various automated applications to record and monitor project schedules and costs, these software applications and programs are not well integrated and do not provide critical functionality and benefits required to manage the Department's large, complex work program. A standardized approach could reduce operating costs, provide more effective management information, and make it easier to share resources across division boundaries – managing more with less.

4.3.3. Program and Project Management – Organizational Issues

Typically, a capital project in FDOT's Work Program is implemented by a succession of different project managers in District level Planning and Programming, Production and Operations divisions. Exhibit 4-10 presents the current high-level organizational structure for a typical FDOT District office. No single individual at the project level is responsible for ensuring that the project's scope, budget, schedule and quality is effectively managed from inception through completion.

The project team recognizes that given the constraints facing FDOT in terms of retaining talented and experienced staff, it is not always possible to have a single person handle the project from inception through completion. However, having one team responsible for delivering projects from start to finish would significantly improve the program/project management. The project teams should be assembled to match the experience and expertise required by the project, with members of the project team working on several simultaneous projects.

Exhibit 4-10: Current FDOT District High-Level Organizational Structure



Source: Florida Department of Transportation

Current use of project management personnel is ineffective – the Department uses up to three different project managers to oversee different parts of the project development and delivery process, when one individual/team can be selected to manage the entire project. No single individual/team assumes ownership and accountability for developing and delivering the project. Additionally, anecdotal knowledge of the project history, including discussions and rationale supporting planning and design decisions, tend to be lost in this transition between multiple project managers.

4.4 RECOMMENDED STRATEGIES

Recommendation 1: Re-engineer FDOT's program and project management processes, systems and organizational structure

FDOT is successful in delivering projects promised within a given fiscal year. However, it does so inefficiently and at a cost that is not well measured or documented. The Department has organized a number of functional teams to identify opportunities for improving selected aspects of its project management processes. FDOT has also established a project management training program for its in-house staff and consultants. However, to improve the Department's

performance in this mission critical function, FDOT must completely re-engineer its program and project management processes, systems and organizational structure. Ongoing improvement efforts by the Department may provide incremental benefits – but, they only serve to patch a process that is fundamentally flawed. Similarly, training is of marginal value if the Department is not using current and shared processes and technologies, Re-engineering must take a comprehensive approach to improving the Department's program and project management processes. Ultimately, it must accomplish or provide the following:

- Enable FDOT staff and its consultants to efficiently and effectively:
  - Develop detailed work plans, with defined schedules, budgets and resource needs for tasks and subtasks
  - Conduct quantitative resource needs analysis to support staff and consultant resource allocation decisions
  - Track costs and work tasks with respect to proposed budgets and schedules, with information that is current and accurate
  - Test "what if" scenarios for proposed modifications to project scopes and schedules
  - Identify and manage risks
  - Post issues and track progress in resolving these issues
- Record and share data between FDOT staff and/or its consultants via a web-enabled solution, integrated with client/server and desktop applications
- Share related real-time information through integration with other FDOT systems, including FMS, GIS, Trns*port, etc.
- Provide comprehensive project and program reporting for cost and time monitoring and decision support – tailored information to FDOT staff at all levels, from executive management to individual project team members
- Manage controllable costs, predict and mitigate cost and time risk, and improve cost and time estimation on future projects

Organizationally, the Department will need to restructure to support a life-cycle project management approach. A more detailed discussion of this specific recommendation is presented in Chapter 7. The Department will also need to develop project management policies and procedures, upgrade its work processes and train staff and consultants on how to apply current project management technologies and methodologies. Benefits to be gained by these recommended improvements include:

- Avoided costs currently associated with:
  - Uploading and downloading project data between dissimilar district and central office applications
  - Existing project management applications to view time or cost reports in MPS or FMS
  - Maintaining multiple dissimilar project management applications
- Reduce costs by:
  - Making more informed resource planning and allocation decisions
  - Providing managers with enhanced reporting and decision support capabilities
  - Providing managers with real-time, accurate time and cost management information
- Potential for accelerating project schedules with "what if" forecasting capabilities
- Reduce cost and time overruns by improving project planning and estimating metrics

Recommendation 2: Consider legislative changes and additional funding assistance to encourage MPOs to collaborate on regional projects

Numerous stakeholders interviewed by KPMG expressed concern that Florida's Metropolitan Planning Organizations (MPOs) often are focused more on parochial planning issues, and do not adequately support regional transportation improvements proposed by the state to improve mobility and safety. State transportation and economic development officials often would like to implement regionally significant projects that are designed to attract or retain businesses, manage growth or enhance emergency evacuation capacity. However, federal statutes clearly provide MPOs with considerable authority to determine their own local transportation planning priorities. Florida should consider selected changes to its state statutes and provide additional funding assistance to MPOs, to encourage stronger cooperation and collaboration on regionally significant projects.

Background

Federal statutes require that urbanized areas throughout the United States establish MPOs to assume responsibility for developing long and short-range plans for implementing transportation investments in the region. MPOs in Florida are represented by a board of 5-19 local elected officials, who jointly evaluate and select the area's surface transportation project priorities. Projects proposed by local government agency members of the MPO, as well as regional improvements endorsed and funded by FDOT, are reviewed for inclusion in the region's Transportation Improvement Program, or TIP. Projects must be included in the MPO Long Range Plan and TIP to receive federal-aid funding. Under authority delegated to the Department by the Governor, FDOT evaluates each MPO TIP (or periodic TIP amendment) to determine whether projects are:

- Compliant with air quality conformity standards (for air quality non-attainment or non-attainment maintenance regions)
- Conforming to state or federal policy or funding eligibility requirements
- Fiscally-constrained with respect to available funding

Once approved by the Department, projects from each MPO TIP are incorporated in Florida's State Transportation Improvement Program (STIP). At times, FDOT may propose to fund transportation improvements that the local MPO opposes. For example, the Department may wish to widen an existing highway to improve regional mobility – for personal, business, or commercial travel, or to accommodate emergency evacuation. Like any project sponsor, FDOT is encouraged to work with an MPO or group of MPOs to convince local officials of the project's merits. However, the MPO has the ultimate discretion, as defined in federal regulation, to decide whether to include the project in its TIP – even if the improvement would be programmed entirely with DOT-attributable federal funds.

The challenge to advance regionally significant transportation projects in Florida may sometimes be complicated further by the sheer number of MPOs that FDOT must

accommodate – particularly when numerous MPOs comprise a single metropolitan area. Exhibit 4-11 summarizes the number of Metropolitan Statistical Areas (MSAs) [4] and the number of MPO's for the 15 largest states in the country. This exhibit indicates that Florida's urbanized population today is concentrated in 19 MSAs.

This exhibit also shows that Florida is represented by 25 MPOs – more than any other state except Texas, which also has 25 MPOs. The Tampa-St. Petersburg-Clearwater MSA alone is represented by four MPO's. Three other MSA regions are represented by two MPOs each.

Exhibit 4-11: Summary of MPOs and U.S. Census MSAs for 15 Most Populous States

State	Number of U.S. Census MSAs (1999 Pop. Estimate)	Number of MPOs	Difference between number of MPOs and MSAs
Washington	6	8	2
Maryland	3	5	2
North Carolina	12	17	5
Virginia	8	11	3
Georgia	8	11	3
Massachusetts	5	10	5
Michigan	7	12	5
New Jersey	2	3	1
Ohio	13	16	3
Pennsylvania	15	16	1
Illinois	9	11	2
Florida	***19***	***25***	***6***
New York	9	14	5
Texas	20	25	5
California	16	15	-1

Source: U.S. Bureau of the Census, 1999 Population Estimates; KPMG Consulting Research, 2000

Consolidating New MPOs

Population data from the Year 2000 National Census is expected to confirm the growth of 1-2 new urban areas in Florida that could be represented by their own respective MPOs. However, designation of a new MPO requires "agreement of the Governor and the affected local units of government representing 75 percent of the population in the metropolitan area. The central city or cities must be among the units of local government agreeing to the redesignation."[5] As an alternative to establishing any new MPO, the Governor may request that new urban areas join an existing MPO, if new and existing urban areas are contiguous and the existing MPO is receptive to the proposed merger.

Encouraging Consolidation and/or Cooperation with Existing MPOs

[4] U.S. Bureau of the Census, 1999 population estimates
[5] 23 U.S.C., Part 450, Subpart C, Section 450.306(d)

Consolidating existing MPOs may provide the means to establish a metropolitan planning area and a TIP that is more regionally focused. However, according to federal statute, redesignation requires "agreement of the Governor and the affected local units of government representing 75 percent of the population in the metropolitan area. The central city or cities must be among the units of local government agreeing to the redesignation."[6] Essentially, a majority of the elected officials representing two or more MPO regions must agree to consolidate for any redesignation to occur.

Federal statutes give MPOs the explicit authority to determine their own transportation project priorities and to decide the terms for which the MPO may consider redesignation. To encourage metropolitan planning areas to collaborate on regionally significant projects, Florida may want to focus on changes in state statute and state transportation funding policies:

- *Provide financial incentives to encourage two or more smaller MPOs to merge, while keeping the membership capacity of the merged MPO in conformance with the current Florida Statutes* . FDOT should consider providing financial incentives to encourage two or more existing MPOs to merge into a single entity without expanding the total membership capacity of the merged MPO beyond the limit allowed under the Florida Statutes. Consideration should be given for providing operating grants on a limited basis to encourage two or more existing MPOs to merge into a large entity.

- *Provide weighted consideration to MPOs applying for Transportation Outreach Program (TOP) funds.* If two or more MPOs agree to collaborate on a project of regional significance, the proposed project should receive additional weighting for funding consideration in the TOP program.

- *Allow MPOs to designate voting representatives from other interest groups.* Currently, Florida Statutes only allow local elected officials to serve as voting Board members. One of the concerns noted in the interviews (for this study) was the lack of continuity and stability in project review and planning caused by periodic changes in elected officials and subsequent representation on the MPO. Involving non-elected stakeholders in the MPO process would mitigate that concern. MPOs in other states gain valued input from members of the business community, state agencies, universities, civic groups and other selected constituents, by giving these entities Board seats with full voting rights. The state should consider statutory revisions that create these opportunities for MPO's in Florida.

- *Encourage MPOs to merge by allowing more voting members.* The state should consider revising Florida Statutes (Title XXVI, Section 339.175) to allow for more than the apportioned voting members in a merged MPO comprised of two or more smaller MPOs agreeing to redesignation/consolidation. By expanding the membership capacity for a merged MPO, local government agencies would be assured of a level of representation that is the same or greater than they currently enjoy.

[6] 23 U.S.C., Part 450, Subpart C, Section 450.306(d)

Investigate legislative options to bypass the MPO process in cases impacting public safety

Florida should evaluate proposed changes to state and federal statutes and regulations that would allow FDOT to bypass MPO planning requirements in extreme cases when transportation needs directly impact public safety -- particularly with respect to emergency operations and emergency evacuation. Florida has unique emergency management needs created by its climate, geography, population location and density, and heavy reliance on tourism. Stakeholders interviewed by KPMG expressed concerns that parochial transportation planning decisions by selected MPO's did not adequately address public safety requirements identified by the state. Legislation (state or federal) that supports executive or legislative intervention where emergency management is clearly at issue provides the state with an opportunity to fulfill its public safety responsibility while supporting Florida's infrastructure and economy.

Summary – Federal code and regulations clearly define the roles and responsibilities of MPOs. Despite the concerns and frustration noted by stakeholders during interviews with KPMG, several examples throughout Florida (Miami, for one) were cited where the MPOs consistently add value through their participation and representation of local and regional interests. The MPOs, working with and through the MPOAC, should be encouraged to identify and emulate "best practices" from throughout the state in working cooperatively together and with the FDOT to plan for and meet future transportation needs. Beyond the recommendations presented above, Florida would need to discuss the impact of proposed state statutes on federal code and regulatory requirements with the FHWA and other federal authorities.

Recommendation 3: Streamline the process for certifying projects as Type 2 Categorical Exclusions

As stated earlier in this Chapter, federally funded transportation improvements must comply with environmental review and documentation requirements established by the National Environmental Policy Act (NEPA). To evaluate and document the environmental impact of a proposed transportation project, NEPA requires that FDOT develop either an Environmental Impact Statement (EIS), Environmental Assessment (EA) or Categorical Exclusion (CE).

Over 90 percent of the projects in FDOT's annual program are classified as "Programmatic Categorical Exclusions" – a blanket approval classification for most routine highway maintenance and highway construction work and other actions that present minimal environmental impact. These projects are automatically approved via transmittal of notification to the FHWA.

Projects that do not meet Programmatic CE requirements, yet do not require the level of review inherent in an EA, are classified as Type 2, Categorical Exclusions. A summary of the NEPA documentation workload for FDOT and other state DOT's surveyed by the FHWA is presented in Exhibit 4-12. This exhibit also presents a comparison of the average estimated time required to process a particular class of action. From this data it appears that FDOT develops NEPA documentation to a higher class of action than is done by other states. The Department also

requires one to two years to process a Type 2, CE – a period 2-4 times longer than other DOT's in the FHWA study group.

Exhibit 4-12: Summary of NEPA Documents Processed by FDOT and FHWA Baseline Scan

NEPA Class of Action	Percentage of Total NEPA Actions (by number of projects)		Approximate Time to Process and Approve Action	
	FDOT (actual)[7]	*FHWA Study Average*[8]	*FDOT (estimated)*[9]	*FHWA Study Average*[10]
Type 2, Categorical Exclusion (CE)	77.6%	91.5%	12-24 months	< 6 months
Environmental Assessment (EA)	15.4%	6.1%	2-3 years	18-24 months
Environmental Impact Statement (EIS)	7.0%	2.4%	3-5 years	4-6 years

Source: KPMG Survey of FDOT District Production Staff (2000) and FHWA Survey of Selected State DOT's (1999)

FDOT can dramatically accelerate its NEPA reviews and shorten the development cycle for critical transportation improvements by implementing the following recommendations:

- Begin collecting and monitoring information on the number of EIS's, EA's and CE's processed by the Department and record the time required to process each class of action. FDOT currently does not collect this information centrally. Most of the Districts surveyed by KPMG did not have this data readily available either. Measuring progress in improving this time-consuming process is an important step.

- Reevaluate the Department's criteria for designating a project's recommended class of action. Many stakeholders interviewed by KPMG claim that the Department is overly conservative in determining the level of NEPA review for a project. The Department should solicit information from the FHWA or other DOT's to better understand the processes used in other states to process environmental reviews expeditiously.

- Reevaluate FDOT policy requiring formal public involvement for all Type 2, CE projects. Perhaps only a minor percentage of total CE's require public involvement. The Department should proceed with this requirement when necessary, but not as a rule for all Type 2, CE reviews.

Implementing these recommendations can result in a time and cost savings:

[7] Based on 143 FDOT environmental documents approved or in progress, FY 1997/98 through 1999/00; Data collected via KPMG Survey of District Production Staff, 2000

[8] FHWA Survey of Selected State DOT's, 1999 – Baseline Information for Environmental Streamlining Project

[9] Estimates based on discussions with FDOT staff in District Production offices and Office of Environmental Management

[10] FHWA Survey of Selected State DOT's, 1999

- Fewer EA's or EIS's (which are more costly and time-consuming) and a greater number of Type 2, CE projects
- Average time savings for each Type 2, CE project of 6-18 months

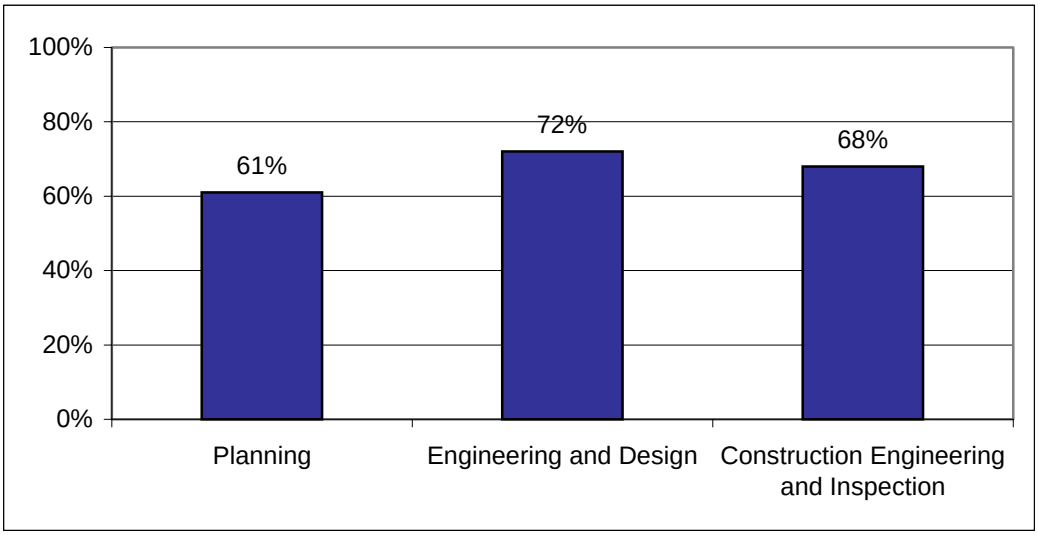
Recommendation 4: Accelerate the process for awarding professional service contracts

FDOT supplements its in-house staff with consultant resources to develop and deliver transportation projects. As Exhibit 4-13 indicates, the Department uses consultants to deliver over two-thirds of its planning, engineering and design, and construction engineering and inspection services. The Department expects this percentage to increase over the next several years.

Consultants interested in providing services to FDOT are required to submit an annual qualifications package. This package details the firm's personnel and capabilities to perform selected work. FDOT reviews each firm's qualifications and posts a list of all pre-qualified consultants by selected work type on the Department's website. The Department also lists consultant projects that it plans to award in the next several months.

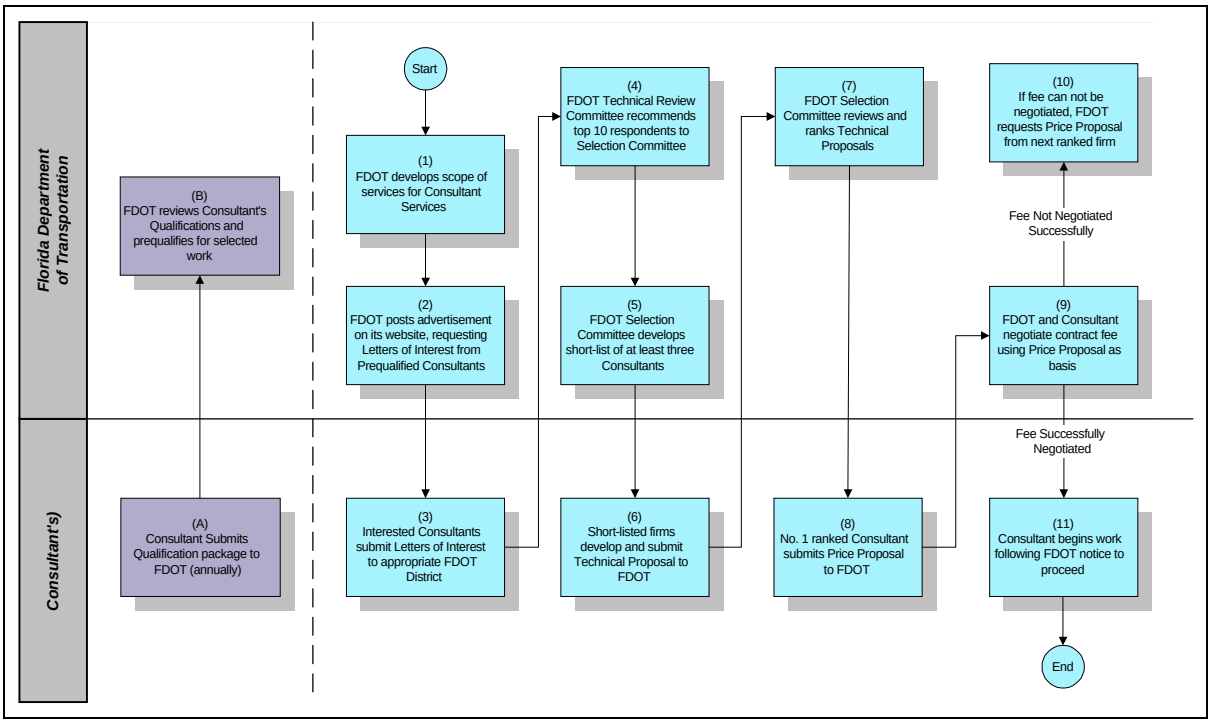
FDOT is required by Florida Administrative Code, Section 14-75.004, to select consultants through a qualifications-based procurement process. Exhibit 4-14 presents a high-level summary of this process.

Exhibit 4-13: FDOT Privatization of Capital Program Implementation



Source: FDOT Business Review, March 2000

Exhibit 4-14: FDOT Consultant Selection Process



Source: Florida Department of Transportation

Toll authorities and local government agencies throughout the U.S. typically are able to award a consultant contract in 90 days. Yet, the Department, like most other DOTs, typically takes considerably more time. For professional services contracts awarded between FY 1997/98 through 1999/00, the Department's average processing time for selected contract types are as follows:

- Planning……170.65 days
- Preliminary Engineering……189.51 days
- Right-of-Way Services……283.00 days
- Construction Engineering Inspection……211.31 days

FDOT should re-engineer the entire consultant selection process, as required to attain a goal of awarding professional services contracts within 90 days from the time a project is advertised. Re-engineering should consider potential process and systems improvements, organizational realignments and legislative changes.

Reducing the time required to process and award professional service contracts will enable the Department to accelerate the project development and delivery cycle. Additionally, it will lower the overhead costs for both the Consultant and the Department.

Recommendation 5: Automate and centralize contract advertising and letting functions for all maintenance and construction contracts

FDOT currently administers two types of contracts for maintenance and construction projects – District Contracts and Statewide Contracts. Key differences between these two contract types are presented in Exhibit 4-15.

FDOT is in the process of automating its contract administration functions, by implementing Trns*port, a suite of pre-construction and construction contract administration applications developed by the American Association of State and Highway Transportation Officials (AASHTO). Trns*port implementation for District contracts is nearly complete. Implementation for statewide contracts will not be completed until sometime in 2001. Within the Trns*port suite are two applications key to contract advertising and letting:

- *Letting and Award System (LAS),* a program that allows FDOT to electronically process and advertise proposals, track plan and proposal holders, process bid information and make award decisions

- *Expedite,* a program that allows contractors to receive bid proposal information and submit bids electronically in a secure, machine-readable form

When these systems are operational statewide, contractors will be able to develop and deliver District bids electronically. Consequently, there is no need for this function to be physically housed and replicated in each District office. FDOT should take advantage of this change in process to consolidate all bid advertising and letting activities. Most of the responsibilities currently assigned to each District's Contracts Administrator, including those listed below, would be transferred to the State Contracts Administration Office:

- Advertising projects
- Conducting bid openings
- Reviewing the bids
- Providing District Technical Review Committees and Awards Committees with data required to properly evaluate the technical aspects, accuracy and responsiveness of bids
- Ensuring encumbrance of funds to advertise and award projects
- Posting bid tabulations
- Ensuring that the low bidder has an approved DBE Affirmative Action Plan prior to award

Each District would retain the authority to make contract award decisions using information supplied by Central Office.

Exhibit 4-15: Key Differences between FDOT District Contracts and Statewide Contracts

Requirement/Function	District Contracts	Statewide Contracts
Contracting Authority	■ All maintenance contracts, regardless of cost ■ Non-federally funded construction contracts less than $1 million ■ All 100-percent state-funded contracts less than $1 million	■ Any maintenance or construction contract
Project Bid Advertising	■ Construction projects < $250,000 and all Maintenance projects – advertised at least twice in local newspaper ■ Construction projects > $250,000 advertised in a Bid Solicitation Notice (BSN) and mailed	■ All projects on FDOT Internet web site
Bid Submittal	■ Paper bids submitted to District office (Trns*port implementation in progress – will support electronic bid submittal)	■ Bids submitted on disk to Contracts Administration Office
Bid Tabulation and Award	■ Coordinated by District Contracts Administrator	■ Coordinated by State Contracts Administration Office

Source: Florida Department of Transportation

Alternatively, options are presently available for FDOT to immediately implement electronic bidding using a third party web-based bidding information service. Eight other state DOTs are already using InfoTech's Bid Express. Features and advantages of using a third part web-based bidding service, such as Bid Express, include:

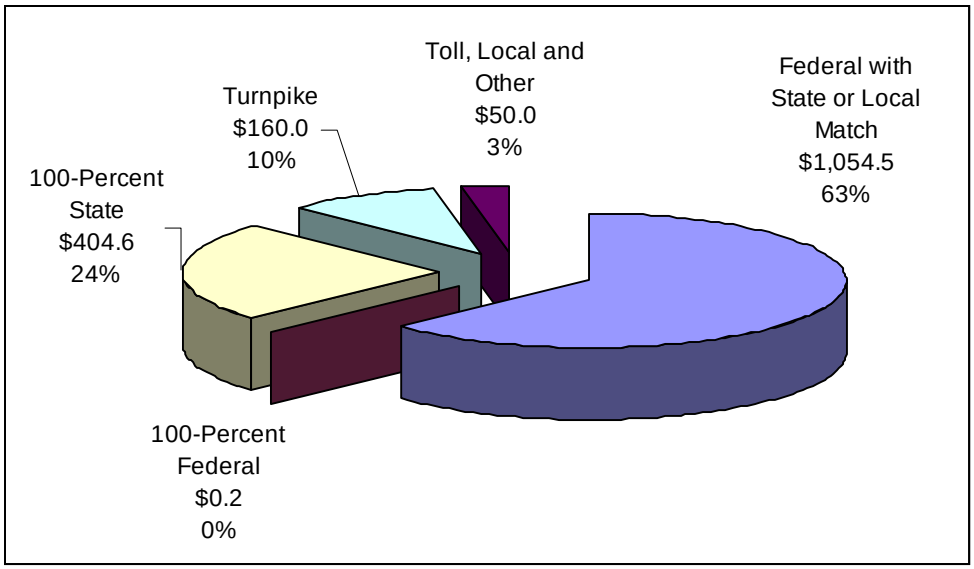
- Facilitates two-way bidding:
  - Bid-related information from the state DOT is posted on the Bid Express site for access by construction contractors from anywhere through the Internet
  - Contractors submit bids electronically through Bid Express to the state DOT – bids are submitted over the Internet
- InfoTech manages the certification authority for digital signatures used to seal bids
- Typically used in conjunction with *Expedite* and other licensed Trns*port modules
- Single integrated process design to handle bid advertisement, bid submission, and bid tabulation activities – all activities are performed by a third-party vendor
- Could be easily integrated with other *e-procurement* initiatives

Recommendation 6: Simplify design and plan preparation requirements for 100 percent state-funded projects

Generally, FDOT develops its construction project plans to meet federal requirements for environmental review, design and plan preparation. By developing plans to this standard, the Department maintains the flexibility to use federal funds on any project up until the time of contract letting. However, this approach is costly and unnecessarily time-consuming for

projects that ultimately do not receive federal-aid reimbursement and that have minimal environmental impacts – including turnpike improvements and 100-percent state funded construction contracts. As Exhibit 4-16 shows, turnpike projects and 100-percent state funded work comprise nearly 34 percent of the construction element of the Department's work program – or $564.6 million in contract value.

Exhibit 4-16: FDOT FY 99/00 Construction Program by Fund Type



Source: FDOT 2000 Program and Resource Plan Summary

The project team recommends that FDOT adopt less stringent environmental review, design and plan preparation requirements to accelerate the development process and reduce costs for projects in this part of the work program. We recognize that not all state funded projects could follow this approach, as such, the Department would have to be selective in identify projects that are 100 percent funded using state funds and could benefit from this approach. The Department could realize time savings of 4-12 months for each project and cost savings proportional to time saved. The Department should monitor the cost-benefits of adopting less stringent environmental review, design and plan preparation, as these factors could impact cost and time overruns, if not correctly done.

Recommendation 7: Improve FDOT's utility location and relocation capabilities

Utility relocation conflicts were identified as a single major cause of construction delays and resulting claims by consultants and contractors interviewed during focus group meetings. Contract cost and schedule data provided by the Florida Transportation Commission indicates that only one percent of all time delays and additional costs on FDOT projects are attributable to utility conflicts. However, national studies suggest that this percentage may be significantly higher than FDOT states.

In a recent survey of 42 state DOT's, the U.S. General Accounting Office (GAO) reported that construction delays caused by utility conflicts comprised a median 13.5 percent of all

construction delays.[11] The GAO study also added that many states are not fully aware of all the utility delays that occur.

The Department can improve its ability to address these utility conflicts and resulting delays by implementing the following recommendations:

- Re-evaluate how the Department documents time delays and additional costs attributable to utility conflicts
- Expand use of value engineering and partnering to coordinate utility relocations with contractor work schedules
- Expand use of state legislation that allows FDOT to reimburse utility companies for selected costs associated with relocating their facilities prior to construction
- Require utility companies to provide the FDOT with copies of as-built plans, certified by a professional engineer or land surveyor as to accuracy
- Provide FDOT State Utilities Office with staffing resources (in-house or consultant) and CADD workstations needed to properly file as-built plans provided by utility companies
- Modify and expand the Department's use of Subsurface Utility Engineering (SUE) consultants to identify utilities early in the project development cycle:
  - Provide policy direction from Central Office to assure consistent, effective use of SUE contracts throughout the state
  - Set up a number of regional SUE contracts, *funded by Central Office*, that Districts can use to identify utility conflicts during the preliminary engineering phase of project development
  - Use the American Society of Civil Engineer's (ASCE) *Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data,* as a guide for developing FDOT policies and procedures for selecting and administering SUE consultant contracts

Recommendation 8: Participate in state enterprise pilot initiatives

Department of Management Services (DMS) is working cooperatively with the State Technology Office (STO) to establish pilot projects demonstrating the cost benefit of *e-procurement* and on-line bidding for state awarded contracts. FDOT recently volunteered to be a charter participant in the pilot of an on-line reverse auction procurement initiative led by DMS and STO. FDOT executives should actively pursue other opportunities to be involved in e-purchasing and on-line bidding pilot initiatives.

The Department will benefit from these collective efforts directly – through reduced cost for proof of concept activities and an opportunity to be an early adopter of new technology – and indirectly – through first hand participation in efforts to upgrade the information technology infrastructure and reduce the cost of support services. Experience gained from participating in these efforts can be leveraged to establish plans for automating and migrating other support services with a goal of further cost reduction and improvements in service.

[11] Impacts of Utility Relocations on Highway and Bridge Projects, U.S. General Accounting Office Report to Congressional Requesters, June 1999.

5. TURNPIKE ORGANIZATIONAL MODELS

This chapter discusses alternative organizational models for the Turnpike District. Alternative organizational models were evaluated based on the established criteria covering organizational and governance, management and operations, financial, and technology areas.

5.1 INTRODUCTION

The Turnpike District is facing many of the same issues driving public infrastructure organizations to reconsider how they should be structured and operated to best fulfill their evolving missions. The FDOT has retained services of Infrastructure Management Group, Inc. (IMG) to develop three strategic options involving the management and operation of the Turnpike District and assess the relative implications of each strategic option on the Turnpike District, FDOT, and the State of Florida.

The three strategic options included in the IMG study are:

- Base Case (status quo)
- Privatization of the Florida Turnpike System through lease or sale
- Enhancement of the Turnpike District

The FTC, as part of this study, has requested KPMG to develop and assess cost-benefits of creating a separate Authority for the Florida Turnpike – the fourth option. Additionally, the FTC has requested the project team to evaluate the three options developed by the IMG and present a summary of qualitative and quantitative cost-benefits of all four options.

KPMG has reviewed the draft final report prepared by the IMG. The following discussion presents a brief overview of three strategic options evaluated by the IMG and the Turnpike Authority option evaluated by KPMG project team. Additionally, a summary of cost-benefits, based on quantitative and qualitative analysis of all four options for the Turnpike District, is presented at the end of this chapter.

5.2 BASE CASE (STATUS QUO)

The Base Case scenario is based on the assumption that the Turnpike District will continue to operate under the current organizational structure as defined in June 2000, in terms of management practices, procedures, organizational structure, financial arrangements, commitment to capital expansion program, service levels, system capacity expansion, and available revenue sources.

The Base Case option was analyzed based on qualitative and quantitative factors such as system impacts, financial feasibility, economic and environmental impacts, organization structure and resource levels, management and operations practices, customer service,

institutional impacts, and legal and regulatory requirements. *Information presented below is derived from the IMG report.* Potential impacts of these factors are briefly discussed below:

5.2.1 System Impacts

The Department's 2020 Transportation Plan projects the Turnpike District to produce about one-third of the capital improvement projects, worth $5.1 billion financed by available cash flow from the Turnpike system, on the Florida Intrastate Highway System over the next 20 years. The capital program consists of $2.2 billion in current capital project commitment and another $2.9 billion in planned capital projects over the next 20 years. The Base Case scenario does not reflect any change in the planned capital improvement projects for the Turnpike system.

5.2.2 Financial Feasibility

The Base Case scenario projects that available cash flow from the Turnpike system will be adequate to fully finance the planned capital improvement projects, operations and maintenance expenses, R&R expenses, and debt service expenses over the next 20 years. The available cash flow incorporates the schedule toll increases in Years 2006 and 2016 for existing roadway segments, and after years 5 and 10 of operations for newly constructed segments. The available cash flow is expected to support a healthy debt service coverage with an average debt service coverage ratio of 1.70 over the 20-year period. Additionally, the scenario assumes that 99 percent of Turnpike revenues will be coming from tolls with concession revenues contributing 1 percent of the estimated revenues.

5.2.3 Economic and Environmental Impacts

Florida's Turnpike system benefits the State and local economies by facilitating convenient, reliable, and safe mobility for Florida residents, tourists, and businesses. Considering the multiplying effect, the planned capital and R&R expenditures for the Turnpike system are expected to produce significant direct and indirect economic benefits for the State of Florida over the next 20 years. The proposed capital improvement and R&R projects would have to be further evaluated to address potential environmental impacts. Since the size and composition of the planned capital and R&R expenditures do not change under the Base Case scenario, the potential economic benefits and environmental impacts would be equivalent to the current program planned for the Turnpike District.

5.2.4 Organization Structure and Resource Levels

The Turnpike District is led by the Secretary and supported by 1,217 FTE positions, including 918 FTE positions supporting the Toll Collection function and 125 FTE positions consisting of the Florida Highway Patrol. The Turnpike District works closely with the FDOT's Central Office and other Districts to carry out its responsibilities; however, the current organizational structure limits the Turnpike effectiveness due to separation of some responsibilities (e.g., toll collection). The Turnpike District outsources a large majority of its core functions, including the planning, design, construction , operations & maintenance, and concessions functions. The Base Case

scenario, does not proposes any change in the current organization structure and resource levels.

5.2.5 Management and Operations Practices

As an integral part of the FDOT structure, the Turnpike is considered a "district", yet it has many unique functions – revenue generation, concessions management, debt financing – the other districts do not have. The current management and operations practices strive for uniformity across all eight districts; however, the overall effectiveness of the Turnpike District is some what constrained by State procurement requirements and limited flexibility of State personnel system. Additionally, the Turnpike District is obligated to follow Federal (FHWA) requirements for project development, which often limits flexibility and efficiency, even though, the Turnpike projects are financed from toll revenues and debt instruments. Under the Base Case scenario, the current management and operations practices will continue to exist under its current format.

5.2.6 Customer Service Impacts

The Turnpike District provides many of the traditional tollroad customer services – food, fuel, police, and emergency road services – along much of the mainline. These services are offered on a limited basis on the newer segments of the Turnpike system. As a part of FDOT, the Turnpike District has been limited in its capacity to aggressively and effectively market and promote services offered to existing patrons of the Turnpike system or to potential customers. Additionally, the lack of integration with the FDOT Office of Toll Operations limits the ability of the Turnpike District to address customer service issues related to the toll collection function. The Base Case scenario reflects the status quo condition, as such, no change in the current level of customer services is projected.

5.2.7 Institutional Impacts

Among the potential benefits under the Base Case scenario include continuation of the current institutional arrangement – with the Turnpike District functioning as a full FDOT district – and integration of project planning and programming activities between tolled and non-tolled components of the State transportation system. Among the potential disadvantage of the status quo include treating the Turnpike District as other FDOT districts and State bureaucracy and limited flexibility of State personnel system. Under the current setup, the Turnpike District has a limited authority to serve as a key change agent with FDOT.

5.2.8 Legal and Regulatory Requirements

Under the Base Case scenario, the Turnpike District would continue to adhere to all statutory requirements in the Administrative Processes Act and Transportation Code. Additionally, the Turnpike District would continue to follow legislative and regulatory requirements for project development. Overall, the Base Case scenario does not create any additional legal and/or regulatory requirements; however, they collectively limit responsiveness, flexibility and efficiency of the Turnpike District.

5.3 PRIVATIZATION

The Privatization scenario is based on the assumption that all Turnpike assets will be privatized through either outright sale, lease, or contract management, to a private enterprise under the following three alternative arrangements:

- Private entity with no tax-exempt status for debt financing
- Private non-profit entity with tax-exempt status for debt financing (IRS §63-20 organization)
- Private entity serving as a full operations and management (O&M) contractor

The Privatization option was analyzed based on qualitative and quantitative factors such as system impacts, financial feasibility, economic and environmental impacts, organization structure and resource levels, management and operations practices, customer service, institutional impacts, and legal and regulatory requirements. *Information presented below is derived from the IMG report.*

Potential impacts of these factors are briefly summarized below:

5.3.1 System Impacts

The IMG study indicates that the Turnpike capital program could be severely curtailed under the privatization option to provide a reasonable rate of return on equity for a taxable private sector entity. The outright sale of the Turnpike assets would require the perspective investor to defease all outstanding bonds of the Turnpike District and refinance the outstanding debt with approximately 20 percent private equity. The IMG study estimates that the outright sale of the Turnpike assets could reduce the planned capital program between $1 billion to $2.9 billion compared to the Base Case scenario. Smaller capital program could cause the congestion levels on the Turnpike system to increase and limit accessibility to/from the Turnpike system as fewer roads/ramps could be build over the next 20 years.

Under the §63-20 Entity Privatization scenario, the IMG study estimates that private non-profit entity would be able to support the Turnpike capital program worth $4.1 billion ($1 billion lower than the Base Case scenario). The study indicated that the O&M Contractor Privatization scenario can build at least a $6.5 billion capital program ($1.4 billion more compared to the Base Case scenario), enabling the Turnpike system to construct more lane-miles, ramps and interchanges.

The privatization option does offer several advantages in terms of lower operations and maintenance costs, lower toll collection costs, substantial reduction in overhead costs, higher revenues from concessions and advertising, ability to implement congestion pricing and lease of right-of-way.

5.3.2 Financial Feasibility

The requirements to defease all outstanding debt of the Turnpike District, under the privatization option, severely limits the ability of a private entity to generate adequate free cash flow to support the planned capital improvement program. According to the IMG study, the Transportation System Plan (TSP) consumes too much of the available cash flow to make privatization a financial feasible option, without curtailing the capital improvement program. The privatization option could be financial feasible, assuming that no new TSP projects will be financed. Under this scenario, the available Turnpike cash flow would be able to support the currently committed capital program of $2.2 billion. This option produces a reasonable return to the private owner/operator and produces a small cash flow that potentially could be distributed to the private entity as dividend at the end of the contract term.

The §63-20 Entity Privatization scenario could be financially feasible as interest rates are lower with tax-exempt financing, and the §63-20 non-profit organization would not be required to pay taxes. This option could produce a reasonable return to the private owner/operator in the form of operating fee payment and a subordinated debt payment. Under this scenario, the total capital program would be slightly less than the Base Case scenario.

The private O&M operations scenario would be very attractive in terms of financial feasibility. Under this scenario, the Turnpike capital program is likely to be expanded by $1.4 billion beyond the planned capital improvement program. The expansion of the planned capital improvement program will be made possible through efficiencies and effectiveness gains realized through private O&M operations.

5.3.3 Economic and Environmental Impacts

The privatization of the Turnpike asset is expected to contribute to the overall economy of the State by providing cost-effective mobility to Florida residents, visitors and businesses, and expanding the Turnpike system to enhance the mobility options. However, the potential economic benefits under the privatization option are expected to be lower, compared to the Base Case scenario, due to the need to preserve part of its cash flow for debt service re-issuance, a reasonable rate of return of private sector equity, and tax payments.

The two non-taxable privatization scenarios are expected to produce higher economic benefits compared to the outright sale of the Turnpike assets. The O&M Contractor Privatization scenario is expected to produce the highest economic benefit. As mentioned earlier, the proposed capital improvement program would have to include steps necessary to address the potential environmental impacts.

5.3.4 Organization Structure and Resource Levels

The organization structure, under the privatization option, is likely to be quite lean, focused on customer service functions and innovative practices to carry out its goals and objectives in the most efficient and effective manner. The IMG study estimated that under the privatization

option, Turnpike and Toll Operation staffing requirements could be reduced by 94 and 99 percent respectively through consolidating responsibilities and outsourcing.

5.3.5 Management and Operations Practices

The privatization option offer several advantages over the Turnpike District in terms of greater flexibility to apply innovative business practices, enhanced emphasis on building partnerships to promote current Turnpike system, increased patronage, ability to enhance toll, concessions and other revenues, less stringent procurement and personnel policies and procedures, competitive compensation structure, less stringent project development requirements.

5.3.6 Customer Service Impacts

The privatization option would allow the private owner/operator of the Turnpike system to apply best practices in customer service adopted from other tolled facilities and "lessons learned" from private sector. Additionally, the private owner/operator could be expected to extensively market and promote its services to both current and likely customers, and offer new services – e.g., hotel, conference center, truck stops, ITS capabilities, and telecommunication network – along the Turnpike system to enhance system utilization and profitability.

5.3.7 Institutional Impacts

The privatization option would make the private owner/operator fully responsible for Turnpike system operation, maintenance, and development/enlargement, including implementing toll rate changes and collecting toll and non-toll revenues. This option provides the owner/operator the maximum flexibility to apply industry practices to optimize the cost-effectiveness of Turnpike management, operations and preservation. Integration of project planning, programming, and environmental reviews for the planned Turnpike capital improvement program would have to be closely coordinated between the private entity and FDOT.

5.3.8 Legal and Regulatory Requirements

Implementation of the privatization option would require statutory authority to allow the State to sell or lease the Turnpike assets. Additionally, FDOT/State and the private owner/operator would have to come to a common understanding about how toll rate could be changed, whether eminent domain authority would convey to the acquiring entity, whether or not the private entity would be required to repay state and/or federal grant funds received in the past, and performance requirements. The privatization option would require strong contractual and regulatory safeguards to ensure that the State receives adequate performance and services from the private entity and that the transportation interests are properly protected.

5.4 ENHANCEMENT OF THE TURNPIKE DISTRICT

The enhancement of the Turnpike District option is based on application of best practices in management, finance, organization, and operations, including outsourcing within FDOT, with a

greater emphasis on non-toll revenues and a commitment to an expanded capital program based on a lower debt-service coverage target.

The enhancement of the Turnpike District option assumes continued operation of Florida's Turnpike at a high level of service by an organization unit of FDOT with integration of the Office of Toll Operations and other tolled highways and bridges currently owned and operated by FDOT into the Turnpike system.

The Enhancement of the Turnpike District option was analyzed based on qualitative and quantitative factors such as system impacts, financial feasibility, economic and environmental impacts, organization structure and resource levels, management and operations practices, customer service, institutional impacts, and legal and regulatory requirements. *Information presented below is derived from the IMG report.*

Potential impacts of these factors are briefly discussed below:

5.4.1 System Impacts

The enhancement of the Turnpike District option is expected to support $4.3 billion in new capital improvement projects ($1.4 billion higher than the Base Case scenario). The additional capital improvement program would allow the Turnpike District to provide additional capacity to attract new patrons and to enhance or maintain the current levels of service. Additionally, the enhancement of the Turnpike District would allow the Turnpike District to institute several different approaches for enhancing the non-toll revenues – e.g., concession revenues, advertising revenues, lease of real estate, lease of right-of-way, park and ride fees. The IMG study estimated that under the Enhanced District option, the Turnpike District would be able to realize moderate reduction in FDOT overhead, operations and maintenance, R&R, and toll collection related expenses.

5.4.2 Financial Feasibility

The IMG study estimates that increase in toll and other revenues and reduction in operating expenses due to greater operating efficiency would allow the enhancement of the Turnpike District option to finance the expanded capital improvement program. In order for the expanded capital improvement program to be feasible, the enhancement to the Turnpike District has to generate expected operating savings and increased toll revenues.

5.4.3 Economic and Environmental Impacts

The enhancement to the Turnpike District option is expected to contribute significantly to the overall economy of the State through enhancing mobility to Florida's residents, visitors and businesses, expanding the capacity of the Turnpike system, and facilitating the development of local communities served by Turnpike facilities. The expanded Turnpike capital program is expected to produce the most direct and indirect economic benefits for the State of Florida over the 20 years; however, the expanded capital program should carefully evaluated for potential environmental consequences.

5.4.4 Organization Structure and Resource Levels

Under the enhancement to the Turnpike District option, the Turnpike District, as a stand-alone enterprise, would report directly to FDOT Secretary. The Florida Transportation Commission would continue to serve as the primary liaison to the Turnpike Enterprise. Additionally, the responsibilities/functions currently being performed by FDOT – account payable and receivable, cash forecasting, financial system management, treasury, toll collection, etc. – would be incorporated within the Turnpike Enterprise. The IMG study estimated that the enhancement to the Turnpike District could result in significant reduction in Turnpike and the Office of Toll Operation staff through combination of outsourcing and consolidating functions.

5.4.5 Management and Operations Practices

The enhancement to the Turnpike District option offer several advantages in terms of allowing the Turnpike Enterprise to set up its own policies and procedures regarding procurement, staff development, project planning and development, operations and maintenance of the Turnpike system, marketing programs and promotional events, financial management, and public-private partnership.

Collectively these advantages are expected to result in increased toll and non-toll revenues and reduced operating expenses – thus, allowing the Turnpike Enterprise to support the expanded capital improvement program.

5.4.6 Customer Service Impacts

The application of best practices would result in enhanced levels of customer services that go beyond the traditional food, fuel, police, and emergency road services that are currently provided. Additionally, the transfer of the Office of Toll Operations to the Turnpike will allow greater customer service integration of toll collection and reporting functions with other Turnpike functions.

5.4.7 Institutional Impacts

The enhancement to the Turnpike District option is based on the Turnpike District, as a business-oriented enterprise, operating as an integral part of FDOT with the Turnpike Secretary reporting directly to FDOT Secretary and the Florida Transportation Commission serving as a primary liaison to the Turnpike Enterprise. Overall, institutional impacts are expected to be minimal as project planning and programming for tolled and non-tolled components of the transportation system will continue to be closely coordinated between the Turnpike Enterprise and FDOT.

5.4.8 Legal and Regulatory Requirements

Florida Statutes provide necessary flexibility to the Turnpike regarding how it can be structured and operated – power to acquire, construct, and operate turnpike projects, ability to acquire

property through eminent domain, authority to set toll rates, permission to enter into contracts and leases, use of tax-exempt bond financing.

Since the governance of the Turnpike would continue through the FDOT Secretary, Turnpike Secretary, and the Florida Transportation Commission, no major changes in Florida Statutes are anticipated for incorporating various enhancements to the Turnpike District.

5.5 AUTHORITY OPTION

Florida's transportation infrastructure plays a vital role in boosting the economic prosperity of the State by providing efficient mobility of people and goods. Historically, revenues generated from motor fuel taxes and other user fees were sufficient to fund highway construction; however, times have changed. Today, over 60 percent of the Florida Interstate Highway System improvements needed by 2010 and 2020 remain unfunded. As the needs for new highways increased in the past several years, many state transportation agencies and public officials have turned their focus on Toll Authorities as a means to fill vital transportation needs.

The power behind this option is the opportunity to continue to monitor and enhance the asset value of the Florida's Turnpike and execute a decision to privatize if all conditions support a business case and acceptable return. The Authority organization would be responsible for closely monitoring market conditions as part of the finance and administration function. Essentially all the benefits discussed under the enhancement to the Turnpike District are also applicable to the Turnpike Authority option.

To conduct a comprehensive assessment of the Authority option, the project team evaluated the Turnpike District, under the separate Authority model, using the following qualitative criteria:

- **Organizational and Governance**
  - Organizational and Governance Flexibility
  - Personnel and Human Resources
  - Organizational Culture
  - Institutional Knowledge
- **Management and Operations**
  - Level of Service
  - Ability to Control and Reduce Costs
  - Contracting/Procurement Flexibility
  - Project Delivery
  - Necessity to Comply with Federal Regulations
  - Ability to Apply/Institute Innovative Business Practices
  - Ability to Acquire Required Right-of-Way Parcels

  - Public/Private Partnership and Competitive Environment
- **Finance**
  - Bonding
  - Innovative Financing
  - Public/Private Partnership
  - Leveraging State and Local Funds
- **Technology**
  - Use of Technology
  - Technical Support
  - Public/Private Partnership

Potential benefits/impacts of these factors are briefly discussed below:

5.5.1 Organization and Governance

This section evaluates the Turnpike Authority option against organization and governance criteria including organizational and governance flexibility, personnel and human resources, organizational culture and institutional knowledge.

Organizational and Governance Flexibility

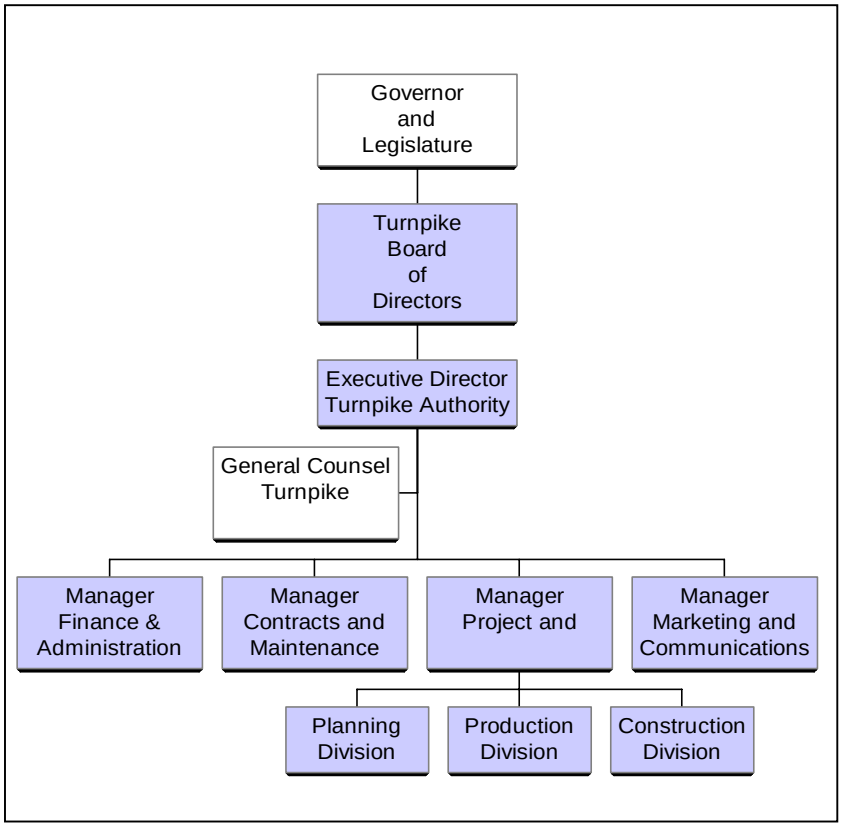
The Florida Turnpike Authority could be organized as a semi-autonomous entity that would be responsive to the mobility needs of Florida's residents, visitors and businesses. Similar to other public authorities, a board of commissioners would directly establish Turnpike Authority policies for system operations and maintenance, capital expansion, toll pricing, budgeting, debt issuance and management, human resources, procurement, etc. As appointees of the legislature and the governor for a specific term, board members would be responsive to the citizens' representatives who appointed them, but at the same time be insulated from short-term, or localized political issues, which would be contrary to the statewide mobility mission of the Authority.

For example, the Board could consist of five people: the Secretary of FDOT, a representative from the Florida Transportation Commission, and three legislative and/or governor appointees. The Board Chairperson would be elected by the Board from among the three appointees. FDOT Secretary's involvement will ensure that the Department has a vested interest in the Authority's success and that both entities work closely on capital project planning and development related activities. The FTC will represent the state transportation enterprise perspective. The appointees will represent the individual and business stakeholder interest in the mobility, safety, service, and economic contribution of the Authority operation.

The Board would have the flexibility to establish the optimum internal management structure to carry out the day-to-day operation of the Authority. As an example, Florida's three major urban expressway authorities have organized themselves as virtual agencies consisting of an appointed board, a small internal staff that oversees the management of the system and a range of private firms that carry out the day-to-day operation, maintenance, construction and other activities of the expressway authorities. The use of private contractors and the establishment of a virtual Turnpike entity with a few key internal staff would allow the Authority to maximize in-house resource utilization. An integral element of the Turnpike Authority strategy is continuous monitoring for the appropriate opportunity to privatize (through outright sale or lease) the turnpike operation.

The appropriate organizational structure (Exhibit 5-1), with a small internal staff, should be designed to quickly and effectively transition responsibility in support of future considerations to privatize. The small staff would include a marketing and communications function to investigate and manage new revenue opportunities, partnerships, and other methods of maximizing the asset value of the turnpike. Under the Turnpike Authority option, the total authority staff would be 20-25 people.

Exhibit 5-1: Turnpike Organization and Governance Structure



The small staff can be successful through effective use of outsourcing and contract management. The Contracts and Maintenance Manager is responsible for outsourcing and

monitoring performance of the toll collections and operations and the maintenance of the Turnpike system. The Project Manager oversees a staff of 10 to 15 senior engineers and design professions who plan and manage contractors on turnpike capital improvement projects. The Executive Director receives legal support from General Counsel and business support from a Finance and Administration Manager. This small, but senior, staff can effectively plan and manage turnpike operations supported entirely by contracted services.

Personnel and Human Resources

The Turnpike Authority would have greater flexibility in terms of developing personnel and human resource policies and procedures – establish its own policies regarding the hiring and compensation of staff. This would allow the Authority to tailor competitive compensation and benefit packages that would be attractive to qualified and experienced transportation professionals. Similar to other public and private entities, the Turnpike Authority would establish policies governing equal opportunity employment, sexual harassment, termination, safe working conditions, etc. that are consistent with federal and state law and reflect the policies of the Authority's Board.

Organizational Culture

Public agencies, like private organizations, are not static entities. Periodically, they will need to change, to restructure themselves, in response to an external event such as reduced funding, or to better meet the needs of their customers and markets. A Turnpike Authority with a small, internal staff of key personnel provides the flexibility and agility to adapt and change culture within the agency more effectively than the current FDOT structure. The Authority option allows the management team to deliver the Authority's unique mission and capabilities in the most efficient manner through long-term focus on preserving and enhancing asset condition, customer satisfaction and financial viability.

Institutional Knowledge

Maintaining institutional knowledge is critical to the smooth operation and success of both public agencies and private companies. It provides staff with an understanding of what strategies and processes have worked and what have not, based on the prior experience of current senior executives and former members of the agency. Preserving institutional knowledge is contingent upon providing a professional work environment that encourages and rewards individuals for making a long-term commitment to an organization and establishing an institutional framework that encourages written documentation of successful policies and practices. The Turnpike Authority option may be somewhat at a disadvantage initially at retaining institutional knowledge than the current FDOT structure; however, it is feasible that all current key staff members and consultants would be able to transfer to the new Turnpike Authority and provide continuity.

5.5.2 Management and Operations

This section evaluates the Turnpike Authority option against management and operations criteria, including level of service, ability to control and reduce costs, contracting/procurement flexibility, project delivery, necessity to comply with Federal Regulations, ability to apply/institute innovative business practices, ability to acquire required right-of-way parcels, and public/private partnership.

Level of Service

The Turnpike Authority would have greater flexibility to provide enhanced level of service. Since public authorities are not limited by existing jurisdictional boundaries, they are much better positioned to address regional transportation issues that transcend traditional boundary lines. The Authority would be able to apply innovative toll pricing strategies to increase patronage and customer satisfaction. Variable toll pricing could control the level of service provided to the toll facility users, which would also lead toward revenue maximization. The institutional setting for providing level of service may not be critical, i.e., there is no reason to believe that the Authority would be more attuned to this than the FDOT District; however, the Authority – created for serving a specific-purpose – is more likely to be efficient in delivery of public goods than the state agency. The combination of variable pricing to control the level of service that leads toward revenue maximization could be a goal of the Authority. The higher level of service could generate additional revenues, which can be applied for rapid expansion of tolled facilities to counter the projected shortfall for funding the Florida Intrastate Highway System.

Ability to Control and Reduce Costs

The Authority will have better ability to control and reduce costs stemming from its ability to enter into innovative procurement arrangements and entertain a broad menu of public-private partnerships. From an organizational perspective, two issues stand out, whereby implementation of the Turnpike Authority model should generate immediate and recurring cost savings:

- Integrating the duties and responsibilities of the Office of Toll Operations into the Authority structure will eliminate duplicative administrative costs
- Without the overhead of FDOT administration and management the cost of operating the Authority could be significantly reduced

Contracting/Procurement Flexibility

Under the Turnpike Authority model, the Authority would be able to develop its own contracting and procurement policies and procedures. The FDOT has to comply with applicable Florida Statutes and Administrative Codes, and Federal guidelines for procurement of professional services, construction and other commodity contracts. The Authority would have a greater flexibility in the area of contracting and procurement as compared to the Turnpike District. This

flexibility could allow the Authority to lower the cost associated with contracting and procurement services.

Project Delivery

The Authority would be able to effectively pursue alternative/innovating (e.g., Design-Build, lump sum) methods of procurement that could provide superior results across the following parameters that influence project implementation costs.

- Minimizes project development costs
- Reduces time and cost overruns
- Provides contractor incentives for timely completion of project milestones
- Allows for risk sharing with contractor
- Allows provision for liquidated damages commensurate with impacts to the Authority

This flexibility shortens the overall project delivery time, which places the facility in revenue service on an accelerated schedule. Under the traditional approach, new road construction employed by FDOT, which follows FHWA guidelines, could require more time for project completion compared to projects that do not have to follow FHWA guidelines.

Necessity to Comply with Federal Regulations

The Turnpike Authority will be a self-funded entity. Under the Turnpike Authority model, the Authority could discontinue the FDOT practice of complying with applicable FHWA regulations, which extends to those cases where the project does not seek and is not eligible for Federal funds. Since FDOT successfully manages its obligation authority, there is no reason to create a "backlog" of FHWA eligible projects. This practice is time consuming and results in adding to procurement complexities and requirements, ultimately adding directly to project costs, or indirectly from inflation through extending the implementation cycle, without any compensating value added.

Ability to Apply/Institute Innovative Business Practices

The Turnpike Authority would be in much better position to successfully incorporate innovative business practices due to its smaller size and focused assignment. Under the Authority model, human resources policies and staff salaries, corporate culture and incentive systems would be designed to supports the needs of the Authority and not the general requirements of FDOT. In many cases the salary structure that works well for the FDOT has not worked for the Turnpike. Solving the human resources issues sets the framework for engaging in innovative business practices. Continued control of the Turnpike under the FDOT acts to perpetuate current business practices, where lack of incentives lead to risk adverse behavior rather than innovation.

Ability to Acquire Required Right-of-Way Parcels

Public authorities are able to exercise the power of eminent domain to acquire necessary parcels for their projects. As an instrumentality of the State, the Turnpike Authority would be granted the power to exercise eminent domain for the purpose of acquiring and assembling necessary right-of-way parcels.

The FDOT has to comply with the stringent Florida Statutes related to eminent domain. The Turnpike Authority would be able to take advantage of its status to expedite acquisition of right-of-way as it does not have to follow Federal guidelines.

Public/Private Partnerships and Competitive Environment

Like many expressway authorities in Florida, the Turnpike Authority could function as a virtual agency. The independent authority structure would encourage close co-operation between the Authority and the private sector in areas of financing, operations and maintenance, project development and delivery, etc. This would, by definition, create the organization structure that not only encourages private sector involvement, but, it would require private sector involvement to maintain and support the Authority operations and functional areas. This would also create a healthy competitive environment amongst the authorities throughout Florida and result in greater flexibility and additional cost savings.

5.5.3 Finance

This section evaluates the Turnpike Authority option against financial criteria, including bonding, innovative financing, public/private partnership, and leveraging state and local funds.

Bonding

The Turnpike Authority will be a self-funded entity. The Authority would enjoy tax-exempt bonding status as an instrumentality of the State of Florida. The financial capacity of the Turnpike Authority would be higher compared to the FDOT District due to the following two reasons:

- The Authority would decide all expansion projects, currently the State Legislature must approve Turnpike expansion projects programmed through FDOT. This approval process created the necessity for an “economic test” to be applied to expansion projects, whereby the performance of the expansion project in and of itself is expected to meet certain debt service targets. A semi-autonomous Authority would presumably issue debt against *system* revenue, which will lead to more rapid expansion of toll facilities. The bond rating would not be affected, the rating is based on the underlying revenue stream produced by toll users. There is nothing inherent in having FDOT operate the Turnpike as the FDOT District that improves its access to capital markets. This would only occur if the FDOT provides credit support with the pledge of backstop financing

- The Authority would be in a much better position to encourage and entertain private sector initiatives for system expansion. The Authority could adopt "lessons learned" from the legislation that created the Transportation Corridor Agencies (TCA) in California regarding the public-private partnership. This would allow the Authority to both solicit private sector proposals for project implementation and private sector proffers in the form of voluntary impact fees to assist in project financing

Innovative Financing

The Authority could accelerate the toll program through privatization of express lanes. This would add capacity in urban corridors and not require public funding that would need to be raised through Authority debt. With respect to investment policy the Authority would be able to pursue a slightly more aggressive investment program than FDOT through the State of Florida. Arbitrage restrictions would remain; however, the expansion of investment product choices should translate into a favorable differential in basis points on investments for the Authority.

The Turnpike Authority could pursue innovative financing strategies that allow the Authority to award construction and maintenance contracts based on the life-cycle costs of assets rather than reliance on the low bid. Over the long-term this could lead to efficient asset preservation rather that maintenance and replacement. Asset preservation can be linked to Design-Build methods of procurement by including a multi-year maintenance agreement as an integral part of the contract, which specifies highway performance measures, which must be met by the contractor.

Public/Private Partnership

The Authority could assume the lead role in the resurgence of interest in urban toll roads. There are a growing number of public-private partnership laws, inspired by the global trend toward meeting the need for major new infrastructure via long-term private franchises. Virginia in 1988 and California in 1989 enacted the first such laws; as of 2000, legislation of this type for transportation infrastructure has been enacted in 16 states. New toll roads developed under these laws are in operation in Alabama, California and Virginia, and there are new toll bridges in operation in Missouri and Puerto Rico. Public-private toll roads are under construction in South Carolina and Texas. The Authority would be in a better position to take the lead role as it is not constrained by FHWA guidelines, and it can have a greater flexibility in terms of contracting and procurement of services.

Leveraging State and Local Funds

The Authority would be an ideal institutional structure to use the Florida State Infrastructure Bank (SIB) for financing assistance focused on accelerated expansion of toll facilities for the FIHS. The Authority also could provide corridor investments in local jurisdictions that do not meet certain financial feasibility tests, e.g., toll revenues insufficient to meet capital and operations and maintenance costs. This could be accomplished by securing dedicated local revenue sources, e.g., local option fuel tax revenues, that would be diverted to the Authority to

make up any deficit in operating income for current meeting capital and operating and maintenance costs.

5.5.4 Technology

Technology has become the focus of private and public sector entities as a means for improving processes and overall performance. The transportation industry is also faced with new methodologies and systems designed to accurately capture and track information used to enhance process/performance management and customer service/management. This section evaluates the Authority option against technology criteria, including the use of technology, technical support, and public/private partnership.

Use of Technology

The transportation industry has seen many advances in the technology sector - Intelligent Transportation Systems (ITS), electronic toll collection, automated highway operations, and driver-alert collision avoidance. These advances have allowed toll authorities throughout the nation to provide better customer service.

The Authority model provides a better opportunity to implement the latest technology using innovative/alternative financing and contracting methods. All technology related improvement, under the FDOT District setup, would have to be coordinated with the Central Office and the State Technology Office. Under the Authority Model, turnpike operations could leverage interoperability standards established by the state (and supported by the technology industry) without being subject to statewide implementations or legislative complications. With a turnpike specific focus and an organizational structure that fully supports the Authority, co-ordination and vision become clearly stated and efficiently managed.

Technical Support

Technical Support represents the ability to serve as a technical reference for the staff and maintain/ upgrade the information technology and systems. Even though, economy of scale can offer advantage in terms of costs, when it comes to technology support, effectively realizing this benefit could be harder then ever. The Authority model offers some benefits in terms of partnering with the private sector for technical support for turnpike specific technology (e.g., electronic toll collection, financial management system, project management system, asset management system). The FDOT, under the decentralized setup, has delegated the responsibilities for technical support to the individual district office for the most part. The Authority model also offers advantages in terms of its ability to readily enter into a lease-agreement for technical equipment and support.

Public/Private Partnerships

The Authority model presents a clear advantage in terms of its ability to create public/private partnerships for contract maintenance and operations, toll collection, technology, project development and project financing. The flexibility to enter into partnerships with private sector

firms allows the Authority to tap into the latest technological resources. Recently, the FDOT entered into an agreement with a private sector firm to install fiber optic cable on the right-of-way sections of the state highway system. The Authority could explore similar opportunities to partner with private sector firm(s) for mutually beneficial projects (e.g., Intelligent Transportation Systems). Typically, under the FDOT District setup, most of the various public/private partnership opportunities would be somewhat difficult due to layers of bureaucratic hurdles. While, under the Authority model, such opportunities can be quickly evaluated and acted upon.

5.6 QUANTITATIVE ANALYSIS OF TURNPIKE OPTIONS

This section present results of the quantitative analysis of all four options for the Turnpike District. All four options were evaluated on the basis of various quantitative evaluation criteria, including the size of the capital improvement program, financial feasibility, average debt service coverage ratio, economic benefits, and potential savings in operations and maintenance of the Turnpike system.

Results of our analysis are presented in the Exhibit 5-2 below. Please note that results for the three options – Status Quo, Privatization, and Enhancement to the Turnpike District – were derived from the IMG study.

Exhibit 5-2: Summary of Quantitative Analysis of Turnpike Options

Evaluation Criteria	Base Case	Privatization	Enhancement	Authority
Size of 20-Year Capital Program	$5.1 billion	$2.2 - $4.1 billion	$6.5 billion	$7.0 billion
Size of Up-Front Payment to State	None	$2.9 - $4.5 billion	None	None
Financial Feasibility	Yes	Yes – with reduced capital program	Yes	Yes
Average Debt Service Coverage Ratio	1.7	2.1	1.5	1.5
Revenue Enhancement Opportunities	Limited opportunities exist for applying best practices, promoting the use of Turnpike and increasing non-toll revenues	Greatest opportunities exist for applying best practices, promoting the use of Turnpike and increasing non-toll revenues	Opportunities exist for applying best practices, promoting the use of Turnpike and increasing non-toll revenues	Greatest opportunities exist for applying best practices, promoting the use of Turnpike and increasing non-toll revenues
Overhead Costs Saving	Status Quo – no additional Overhead costs saving	70 percent reduction in Overhead costs (compared to the Base Case Scenario)	40 percent reduction in Overhead costs (compared to the Base Case Scenario)	50 percent reduction in Overhead costs (compared to the Base Case Scenario)

Evaluation Criteria	Base Case	Privatization	Enhancement	Authority
O&M Costs Saving	Status Quo – no additional O&M costs saving	20 percent reduction in O&M costs (compared to the Base Case Scenario)	15 percent reduction in O&M costs (compared to the Base Case Scenario)	20 percent reduction in O&M costs (compared to the Base Case Scenario)
Rehabilitation and Renewal Costs Saving	Status Quo – no additional R&R costs saving	20 percent reduction in R&R costs (compared to the Base Case Scenario)	10 percent reduction in R&R costs (compared to the Base Case Scenario)	15 percent reduction in R&R costs (compared to the Base Case Scenario)
Toll Collection Costs Saving	Status Quo – no additional Toll Collection costs saving	25 percent reduction in Toll Collection costs (compared to the Base Case Scenario)	10 percent reduction in Toll Collection costs (compared to the Base Case Scenario)	25 percent reduction in Toll Collection costs (compared to the Base Case Scenario)
Turnpike Staffing (including OTO staff)	174 + 918 = 1,092	11 + 3 = 14	100 + 30 = 130	25 (including OTO staff)
Contribution to Statewide Gross Product	$13 billion	$7 billion	$16 billion	$16 - $18 billion
User Operating Savings	$18 billion	$9 billion	$22 billion	$22 billion

As presented above, the privatization, enhancement to the Turnpike District, and the Authority options offer substantial benefits, to varying degree, in term of:

- Improving mobility and safety on the Turnpike system
- Preserving and enhancing asset value of the Turnpike system
- Reducing operating expenses
- Increasing non-toll revenues
- Implementing “Best Practices” and “Lessons Learned” from private sector
- Expanding the levels of customer service
- Promoting economic growth

5.7 SUMMARY OF TURNPIKE OPTIONS

This section briefly summarizes advantages and disadvantages of all four options for the Turnpike District, as discussed in this Chapter, to support key decision-makers and stakeholders of the Turnpike District in making an informed choice for the future direction of Florida's Turnpike.

Exhibit 5-3: Turnpike Options – Advantages and Disadvantages

Turnpike Option	Advantages	Disadvantages
Base Case	• Ability to fund planned capital improvement program ($5.1 billion) • Conformance with FDOT and other requirements (e.g., Federal guidelines) • Continuation of institutional and management arrangement • Uniform project planning and development • No changes in current Florida Statutes	• No payment to State • Institutional and cultural differences limit innovation and application of best practices • FDOT challenges makes status quo option undesirable • Emphasis on uniformity among all districts limits opportunity for Turnpike District to achieve its mission and objectives in an efficient manner • Limited customer service focus due to fragmented toll collection function under OTO
Privatization (Taxable – Non-Taxable)	• Financial payment made to the State for sale of the Turnpike system • Transfer of responsibility for operations and management of the Turnpike system to the private owner/operator • Greatest opportunity to implement commercial best practices • Improved customer service • Ability to enhance non-toll revenues • Ability to significantly reduce operating expenses • Faster, better and cheaper delivery of capital projects • Ability to implement alternative toll pricing (e.g., congestion/value pricing, HOT lanes, etc.) • Potentially enhanced use of latest information technology – ITS and toll	• Potentially reduced capital improvement program – portion of revenues will go to pay taxes and dividends • Limited improvements to the Turnpike system – potentially could reduce mobility on the Turnpike system • Limited ability to coordinate the capital project planning and development activities with FDOT • May require changes in current Florida Statutes

Turnpike Option	Advantages	Disadvantages
	collection • Ability to partner with other private sector firms for continuous improvement of the Turnpike system	
Enhancement to the Turnpike District	• Ability to fund the expanded capital improvement program ($6.5 billion) • Continuation of institutional and management arrangement – with added flexibility • Continuation of coordination with FDOT and partners for the project planning and development activities • Ability to enhance non-toll revenues and reduce operating expenses • Integration of OTO functions within the Turnpike Enterprise • Improved emphasis on customer service • Potentially serve as a change agent for FDOT	• No payment made to the State • Continuation of affiliation with FDOT could make the institutional and cultural transformation process a very difficult task • The proposed transformation could be perceived as "Special/Preferred Treatment" to the Turnpike District and may cause employee morale to go down in other districts • May require changes in current Florida Statutes
Authority	• Maximum ability to fund the expanded capital improvement program ($7.0 billion) • Consolidating all functions and responsibilities related to the operations and management of the Turnpike system under a single entity • Greatest opportunity to implement commercial best practices and lessons learned from the private sector • More responsive to customer needs – potentially resulting in increased usage of the Turnpike system • Ability to effectively promote the Turnpike system • Ability to increase non-toll revenues • Ability to substantially reduce operating costs • Faster, better and cheaper delivery of	• No payment made to the State • Coordination of the capital project planning and development activities with FDOT could be hard • May require changes in current Florida Statutes

Turnpike Option	Advantages	Disadvantages
	capital improvement projects • Ability to implement alternative toll structure (e.g., congestion/value pricing, HOT lanes, etc.) • Ability to partner with the private sector firms for mutual benefits • Potentially serve as a change agent for FDOT	

6. ALTERNATIVE SERVICE DELIVERY STRATEGIES

This chapter briefly discusses the level of outsourcing of FDOT's core functions, various alternative and/or innovative contracting techniques employed, and presents recommended strategies for improving the current program, project and/or service delivery methods.

6.1 INTRODUCTION

FDOT outsources a majority of its core functions, including planning, engineering design, right-of-way appraisal, construction, construction engineering inspection, highway and bridge maintenance, and toll collections, to augment the internal resources. FDOT acquires these services from consultants, contractors and private vendors using various contracting methods – professional services, construction and maintenance contracts, and contractual services.

In addition to various conventional contracting methods, Florida Statutes, Section 337.025, allows FDOT to employ innovative techniques of highway construction, maintenance, and finance for highway projects where:

- Innovative techniques could help the FDOT in controlling time and cost increases on construction projects; and
- FDOT could identify the anticipated benefits of using such techniques to the traveling public and the affected community

FDOT, through the Alternative Contracting Program, has applied a number of innovative contracting concepts for highway construction projects. Examples of innovative techniques include, but are not limited to, state-of-the-art technology for pavement, safety, and other aspects of highway construction and maintenance; innovative bidding and financing techniques; accelerated construction procedures; and those techniques that have the potential to reduce project life cycle costs.

The statutes limit the use of innovative techniques to a total contract value of $120 million annually for minor design-build and for bid averaging method (BAM) contracts (*BAM contracts are used for state funded projects, as the Federal Highway Administration does not authorize BAM projects for Federal Aid funding*). The statutory cap of $120 million for innovating contracting methods is not applicable for major design-build contracts with an estimated construction cost exceeding $10 million per phase.

FDOT also uses various alternative contracting methods for construction projects. Florida Statutes, Section 337.11(4) allows FDOT to use time-plus-money (A+B), lane-rental, design-build, no-excuse bonus, lump sum, and incentive/disincentive contracts (Appendix D has additional information regarding innovative/alternative contracting methods). Most alternative contracting methods involve financial incentives to the work with the exception of lump sum, design-build and bid average method. Florida Statutes, Section 337.18 limits financial incentives to $10,000 per calendar day, with the exception of revenue-producing projects.

FDOT is proposing legislation for the 2001 session to remove the dollar cap, both for incentives and disincentives.

Since 1996, FDOT has used various alternative and innovative contracting methods to reduce the overall project cycle time. FDOT continues to closely monitor and evaluate the results of these construction projects. Preliminary results suggest that the use of alternative and/or innovative contracting methods offer distinct time and cost advantages over conventional contracting methods.

6.2 SITUATION ANALYSIS

Over the past several years, there has been a steady increase in FDOT's annual budget allocation for product, product support and operations and maintenance activities – FDOT's annual budget has increased from $3.11 billion in fiscal year 1995-96 to $4.50 billion in fiscal year 1999-00, representing an increase of 44 percent over the past five fiscal years. Similarly, the annual work program has increased both in terms of dollar value and complexity of projects. With additional funding made available through Mobility 2000, the work program activities are likely to increase further. To meet the demands placed by ever growing work program activities, FDOT has gradually increased its reliance on outsourcing to augment its in-house resources. The level of outsourcing varies somewhat from district to district, depending on the function or type of services.

Exhibit 6-1 provides information regarding the current and projected levels of outsourcing in key functional areas on a statewide basis.

Exhibit 6-1: Current and Projected Level of Outsourcing of FDOT Services

Functional Category	Outsourcing (as a percent of budget) FY 1999-00	Projected Percent of Dollars Privatized FY2000-01/05 (5-Year Adopted Work Program)
Preliminary Engineering	72%	76%
Right-of-Way (including OPS)	81%	75%
Construction	100%	100%
Construction Engineering Inspection	68%	74%
Routine Maintenance	70%	Not Available

Source: FDOT Production Management and 5 yr. Adopted Work Program

As indicated above, a large majority of FDOT's core functions are being outsourced currently, hence, substantial amount of in-house resources are utilized for administering and managing these contracts on a day-to-day basis. The project team believes that the projected level of outsourcing, as outline in the current 5-Year Adopted Work Program, is likely to go up further,

as the Department, through its *Organizational Efficiency* initiative, is planning to reduce more than 2,800 staff positions over the next five years by eliminating, reducing, or outsourcing many of its existing functions.

As the level of outsourcing has increased over the past several years, the professional services contracts, construction contracts and maintenance contracts have also gone up, both in terms of numbers and dollar value. Exhibit 6-2 provides information regarding the number of professional services contracts and total dollar value awarded by FDOT during the state fiscal year 1999-00.

Exhibit 6-2: Number of Professional Services Contracts Awarded (SFY 1999-00)

Functional Category	Number of Contracts Awarded - Statewide	Total Contract Value
Planning	29	$12,130,070
Preliminary Engineering	241	$151,444,994
Right-of-Way	60	$36,229,923
Construction Engineering Inspection	87	$125,640,048
Other	18	$12,449,384
TOTAL	**435**	**$337,894,419.00**

Source: FDOT

As indicated above, the total value of all professional services contracts awarded during the state fiscal year 1999-00 exceeded $337 million.

6.3 RECOMMENDED STRATEGIES

This section presents various outsourcing opportunities and alternative/innovative contracting techniques to improve the current program, project and/or service delivery methods.

Recommendation 1: Expand the use of alternative/innovative contracting methods for construction contracts

Alternative and/or innovative contracting techniques for highway construction are helping to minimize the inconvenience and disruption to the traveling public, area businesses and residents by delivering construction projects faster and often cheaper compared to conventional contracting methods. Florida Statutes allows FDOT the necessary flexibility to take advantage of alternative and innovative contracting methods for construction projects, where use of these contracting techniques provide positive benefits to the traveling public and the affected community by reducing time and disruption associated with construction projects.

Since fiscal year 1996-97, FDOT has awarded more than 380 construction contracts using various alternative and/or innovative contracting techniques. A+B, incentive/disincentive,

liquidated savings, lump sum and no excuse bonus contracts make up a large majority of alternative/innovative contracts.

Our analysis of completed contracts indicated that on average, alternative/innovative contracts had lower time and cost overruns when compared to the average time and cost overruns for all construction contracts. Additionally, the construction engineering inspection (CEI) costs, as a percentage of contract value, for alternative/innovative contracts were lower compared to conventional contracts. Exhibit 6-2 presents a comparison of time and cost overruns and CEI costs for alternative/innovative contracts and all construction contracts completed during fiscal year 1998-99.

Exhibit 6-2: Comparison of Time and Cost Overruns and CEI Costs

Contract Type	Average Time Overrun	Average Cost Overrun	Average CEI Costs as a Percentage of Contract Amount
Alternative/innovative contracts	5.1%	5.7%	10.3%
All construction contracts, including alternative/innovative contracts	28.9%	14.2%	14.8%

Source: FDOT Office of Inspector General – Report 04B-0001

During fiscal year 1999-00, the percentage increase in contract cost and contract time on completed contracts was 11.3 percent and 16.4 percent, respectively. For every one percent drop in the contract cost overrun, FDOT could save approximately $8 million. Preliminary indications suggest that the use of alternative/innovative contracting techniques has been highly beneficial, in terms of controlling time and costs overruns, compared to conventional contract methods.

The project team recommends that FDOT expand the use of alternative/innovative contracting methods for highway construction contracts. We also recommend that FDOT propose the following change in Florida Statutes:

- Section 337.025, F.S. – Increase the current annual maximum limit of $120 million for innovative highway projects to $250 million

Additionally, as recommended by the Office of Inspector General in its report *Alternative Contracting Methods*, dated September 2000, FDOT should:

- Develop standardized formulas and guidelines for determining financial incentives for various alternative contracting methods

- Develop specific criteria for selecting candidate projects for innovative/alternative contracting methods

- Ensure that standards, policies and procedures pertaining to alternative and innovative contracting methods are consistently applied throughout the state

Recommendation 2: Expand the use of Asset Management-based contracts for highway maintenance

FDOT spends approximately 11 percent of its annual budget – more than $350 million – on highway operations and maintenance activities. The maintenance budget, distributed among eight districts based on defined formulas, is used for performing routine highway maintenance activities that preserve the State Highway System while maintaining safe and comfortable driving conditions. Examples of routine highway maintenance activities include, bridge inspection and maintenance, mowing, ditch cleaning, fence repair, guardrail, pot hole patching, pavement repair, concrete repair, herbicide, traffic control, rest area maintenance, permitting, and access management among others.

FDOT contracts out approximately 70 percent of routine maintenance activities. Each year, approximately 600 new contracts for highway maintenance are issued and another 400 maintenance contracts are renewed by districts. Typically, for each maintenance contract there could be several work orders issued by District maintenance staff.

A large majority of highway maintenance contracts are maintenance activity and location specific – typically, each district would issue separate contract(s) for various highway maintenance activities (asphalt maintenance, attenuator repair, barricades, berm reshaping, concrete repair, culvert rehabilitation, emergency response, fence and guard rail repair, herbicide, landscaping, lighting maintenance, mechanical sweeping, mowing and litter pickup, pipe and inlet maintenance, striping, etc.) within its jurisdiction. Substantial amount of in-house maintenance and contract administration resources are invested in administering and managing these highway maintenance contracts.

FDOT recently entered into a seven-year Asset Management-based contract, worth $10.5 million annually, for routine highway maintenance of 253 miles of interstate I-75 covering five districts. The Asset Management contract covers all elements of routine highway maintenance activities, including maintenance and security of rest area, drinking water supply and wastewater treatment and disposal. The contractor is responsible for meeting FDOT's performance measures for highway maintenance.

FDOT estimated that performing routine maintenance activities on 253 miles of I-75, using a combination of in-house maintenance staff and conventional contract maintenance services, would have cost the Department approximately $12.3 million annually. Under the Asset Management contract, FDOT would be able to realize a net saving of approximately $1.8 million annually.

Exhibit 6-3 presents a comparison between the Asset Management-based contract and conventional contract for highway maintenance.

Exhibit 6-3: Benefits of Asset Management-based Contract for Highway Maintenance

Conventional Highway Maintenance Contract	Asset Management-based Highway Maintenance Contract
▪ Maintenance activity specific contract ▪ Maintenance contract(s) serving individual districts – similar contracts are issued by districts ▪ Countless work orders are issued for various maintenance contracts ▪ Higher contract administration costs - large number of maintenance contracts are awarded/renewed each year ▪ Increased contract management costs – maintenance contracts are managed individually ▪ Performance of these maintenance contracts is monitored at individual contract level	▪ One contract encompassing all routine highway maintenance activities, potentially serving multiple jurisdictions (counties and/or districts) ▪ Lower contract administration and management costs – significant reduction in number of maintenance contracts ▪ Contractor has a vested interest in meeting performance standards set by FDOT – multi million dollar contract

As presented above, the Asset Management concept for highway maintenance allows FDOT to consolidate individual contracts for various highway maintenance activities, along a section of highway, into a single performance-based contract. Concern regarding the Asset Management-based contract is that it limits the opportunity for smaller contractors to compete. FDOT could overcome this concern by requiring the prime contractor to sub-contract a set percentage of the maintenance activities, measured as a percentage of the total contract value.

The project team recommends that FDOT expand the use of Asset Management-based contracts for highway maintenance. Under this concept, FDOT would be able to reduce and/or reassign in-house maintenance staff and equipment, and realize significant cost-savings in maintenance contract administration and contract management related costs.

Recommendation 3: Consider grouping of professional services contracts to establish enhanced regional coverage

FDOT outsources many professional services, including planning, engineering design, right-of-way appraisal, and construction engineering inspection, to augment in-house technical resources. FDOT acquires these services through competitive negotiation – the process requires a competitive selection of the consultants based on qualification, followed by negotiations to establish a fair, competitive and reasonable fee for the desired services.

The current process for awarding professional services contract is time consuming and resource intense.

Exhibit 6-4 presents the number of professional contracts issued during the last fiscal year and the average time for awarding these contracts.

Exhibit 6-4: Professional Services Contracts SFY 1999-00

Contract Category	Number of Contracts SFY 1999-00	Average Contract Awarding Time (Advertisement to Award)
Planning	29	170.65 days
Preliminary Engineering	241	189.51 days
Right-of-Way	60	283.00 days
Construction Engineering Inspection	87	211.31 days

Source: FDOT

As presented above, FDOT awards more than 400 contracts annually for planning, preliminary engineering, right-of-way, CEI, and other professional services. The average contract award time ranges from approximately six months to nine months depending upon the type of professional services.

Our review of the professional services contracts indicated that FDOT has made good progress in consolidating many professional services contracts, especially for planning and CEI services. However, the majority of professional services contracts awarded presently are project specific and almost all of the contracts are district specific.

The current situation presents FDOT an opportunity to combine several professional services contracts into a single large contract serving multiple projects (e.g., preliminary engineering for multiple projects on a single corridor or for projects located within certain geographic proximity) within a particular district and/or serving multiple districts (e.g., instead of two/three adjoining districts issuing their own contracts for planning or CEI, a single contract for planning or CEI serving multiple districts could be awarded). Chapter 14-75, F.A.C. allows FDOT the necessary flexibility to group major professional services contracts – for similar construction, rehabilitation, or renovating activities – where the grouping of professional contracts provide positive benefits to the Department. Concerns regarding the grouping of professional contract services would limit competition and participation by smaller consulting firms could be adequately addressed by requiring the prime consultant to sub-contract a set percentage of the contract value.

The project team recommends that FDOT consider grouping of professional services contracts to enhance regional coverage. Such an initiative would allow FDOT to reduce the total number of professional contracts awarded annually – potential savings in contract administration and management costs – and would offer districts the necessary flexibility to eliminate redundant contract administration activities (contract advertisement, short listing, selection and award process) where possible and maximize in-house resource utilization.

Additionally, on a related subject, the project team has the following two recommendations for grouping of responsibilities within the preliminary engineering contracts.

Historically, FDOT has prepared specifications packages for design plans prepared by engineering consultants. Construction contractors indicated that a high percentage of construction claims and cost overruns are related to conflict and/or ambiguities between engineering plans and specifications. FDOT has recently started to transfer the responsibility for specifications preparation work to engineering design consultants, as part of the new consultant design contracts, on a selective basis. Full implementation of this initiative is targeted for beginning of the state fiscal year 2003.

We recommend that FDOT accelerate the proposed implementation of the FDOT initiative to assign consulting engineers the responsibility for preparing specifications. Early implementation of this important initiative would allow FDOT to reassign in-house technical resources, currently engaged in preparing specifications, and give consulting engineers the total responsibility for preparing a complete set of documents – engineering plans and specifications.

The right-of-way process includes all activities related to acquiring the property rights necessary for the construction and maintenance of the state transportation system. FDOT outsources many right-of-way related activities, including conducting title search, developing right-of-way plans, conducting appraisals, and negotiating with the affected property owners. The District's Right-of-Way Division is responsible for acquiring necessary parcels for the construction and maintenance of the state transportation system within its jurisdiction.

For timely and cost-effective acquisition of right-of-way parcels, a great deal of coordination is required between the engineering design and right-of-way consultants. Many internal and external stakeholders interviewed during this study indicated several instances where lack of proper communication between the engineering design consultants and the right-of-way consultants had resulted in either changing of design plans during the later stages of the project design or extending the right-of-way acquisition process.

We recommend that FDOT should consider including the following right-of-way acquisition-related activities as an integral part of the preliminary engineering contract services:

- Preparing initial Right-of-Way maps and plans
- Identifying affected property and performing title search
- Contacting affected property owners
- Conducting appraisal of properties
- Support FDOT in property acquisition negotiation with property owners

Giving engineering design consultants the responsibility for selected right-of-way related activities would ensure better coordination and improved communication between the engineering design and the right-of-way activities. The engineering design consultants could further outsource these services to sub-consultants; however, they will be responsible for coordinating right-of-way related activities.

Recommendation 4: Change the Florida Statutes for Right of Way acquisition to reduce cost and time

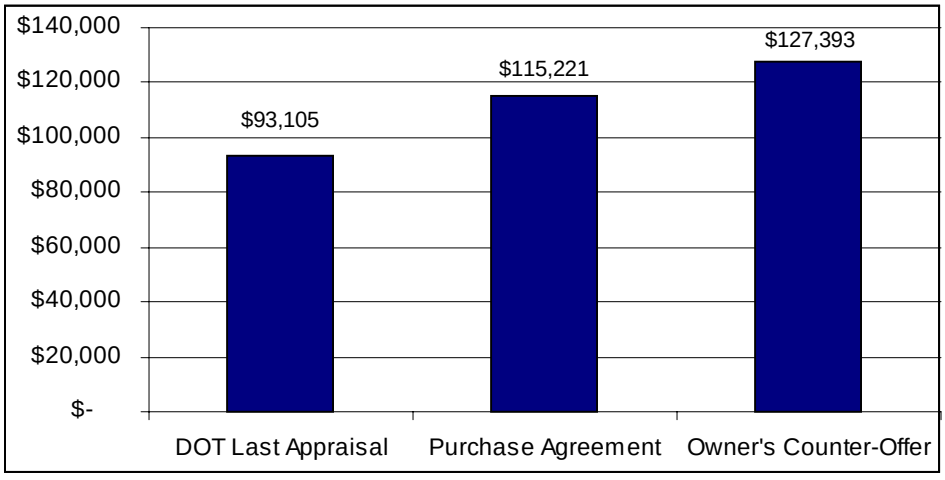
The FDOT is required by law to reimburse each property owner from whom property is acquired for highway purposes to the extent of the difference, if any, between the fair market value of the entire tract before the taking and the fair market value of the remaining property immediately after the taking. The appraised property value serves as a starting point for negotiations between the FDOT negotiators and property owners with the ultimate goal of acquiring the property. If they are unable to reach an agreement on a price, and the property is required for the highway project, then FDOT files a condemnation suit and the court determines the property's value.

Throughout the right-of-way process, the Federal regulations and Florida statutes require that in order to facilitate the construction of a public improvement, the rights of property owners should be fully respected. Additionally, Florida Statutes, Section 73 requires that FDOT compensate business owners for any profit losses as a result of the FDOT acquiring a portion of their property. Florida law also requires FDOT to pay all reasonable costs for appraisers, attorneys, and other experts the property owner hires for negotiations or to represent the property owner in court in case of a condemnation suit. These laws, governing right-of-way acquisition, are designed to protect rights and interests of the property owners; however, they have created an incentive for property owners to litigate rather than negotiate the sale of their property.

In fiscal year 1999-00, FDOT acquired a total of 1,603 parcels, of which, 1,029 parcels – approximately 64 percent – were acquired through negotiation, and another 574 parcels – about 36 percent – were acquired through the condemnation process.

Exhibit 6-5 presents the average FDOT appraisal value, the average purchase agreement amount, and the average owner's counter-offer for parcels acquired through negotiation.

Exhibit 6-5: Negotiated Parcels – Average Purchase Agreement Amount



Source: Florida Transportation Commission – Performance and Production Review August 2000

As indicated in the Exhibit 6-5, for negotiated parcels, the average purchase agreement amount was approximately 24 percent higher than the latest FDOT appraisal value. For properties acquired through the condemnation process, the average acquisition amount was:

- About 73 percent higher than the last FDOT offer for cases that were settled prior to trial and outside mediation
- Around 88 percent higher than the last FDOT offer for cases that were settled through mediation – a formal session mediated by an approved 3rd party mediator; and
- Approximately 75 percent higher than the last FDOT offer for cases that were settled by court verdict

According to the OPPAGA report (*Justification Review – Right-of-Way Acquisition Program, Report 99-02, August 1999*) Florida pays more in right-of-way acquisition costs than any other state in the nation.

The project team recommends that FDOT propose the following changes in Florida Statutes:

- Florida Statutes, Section 337.011(3)(c) requires FDOT to hold "clean" titles for all properties acquired – Allowing purchasing of title insurance could save valuable time and resources

- Florida Statutes, Section 73.015(3) allows for an optional pre-litigation negotiation – Requiring a mandatory mediation prior to litigation would provide one more opportunity for reaching a negotiated settlement

- Create a simpler right-of-way acquisition process for non-federal projects – projects that do not have to follow all federal requirements as they are 100 percent funded by state funds

- Presently, all registered real estate brokers and licensed salesmen are required to obtain a license from the Department of Business and Professional Regulation (F.A.C. Chapter 475) – Allowing reciprocity for registered real estate brokers and licensed salesmen from neighboring states would increase the pool of qualified talent available for the right-of-way acquisition process

Presently, FDOT's right-of-way acquisition process is supported by more than 450 full time right-of-way, legal and support staff. In our survey of the peer state transportation agencies, we found that FDOT has by far the highest number of right-of-way, legal and support personnel compared to its peer state agencies. Additionally, FDOT relies on the Office of Attorney General's legal staff to augment its in-house legal staff in urban districts for property condemnation cases (*the current statute does not allow FDOT to hire services of private attorneys for right-of-way acquisition process*).

In conjunction with the recommendations above, project team recommends that FDOT consider outsourcing or privatizing selected right-of-way processes, such as property condemnation casework. FDOT could examine historical data and profile case types to identify case characteristics that would justify outsourcing or privatization. Implementation of this recommendation could require FDOT to pursue legislative changes.

Recommendation 5: Transfer the Office of Toll Operation function to the Turnpike District and Outsource the Toll Collection to private vendor(s) using the Revenue-Sharing Concept (discussed below)

The Office of Toll Operation (OTO) is responsible for administering toll collection activities for state-owned and state-operated toll facilities. The OTO functions are initially funded from revenues generated by the state's toll facilities. For fiscal year 1999-00, the OTO had 1,186 full time positions – approximately 70 percent of the OTO staff are employed as toll collectors and toll collector supervisors. The OTO staff is responsible for receipt and deposit of toll revenues, financial accounting, data processing, and security. On non-turnpike facilities, they are also responsible for reviewing plans for initial design and improvement of toll plazas and administering maintenance contracts. The OTO maintains and operates 138 toll plazas on 13 roads and four bridges on various expressways and the Florida Turnpike. Recently, the OTO has decided to discontinue its toll collection services for the Miami-Dade Expressway Authority, effective June 2001. Starting from June 2002, the OTO plans to stop providing other support services, such as toll collector supervisors, financial accounting, and reporting to the Miami-Dade Expressway Authority.

The OTO has outsourced a large majority of its toll collection activities – over 80 percent of toll collection activities were privatized as of fiscal year 1999-00. In fiscal year 1999-00, more than 530 million toll transactions were carried out, generating approximately $440 million in toll revenues. More than 71 percent of toll transactions and toll revenues came from a single source – the Florida Turnpike.

The project team recommends that FDOT transfer the Office of Toll Operation function and resources to the Turnpike District – the Turnpike District being the largest client of the OTO, in terms of total number of toll transactions and the amount of toll revenues collected. This action would allow the Turnpike District to remove one additional layer of bureaucracy and streamline the toll collection function – presently, the Turnpike District has to channel all issues and decisions related to the toll collection function through the Office of Toll Operations in the Central Office. Upon transfer of the toll collection function to the Turnpike District, all decisions related to the toll collection function would be consolidated within the Turnpike District.

Once the OTO function and resources are transferred to the Turnpike District, the project team recommends that the Turnpike District explore the feasibility of entering into an operating lease agreement, based on the revenue-sharing concept, with a private vendor for the toll collection and operation function.

The proposed revenue-sharing concept and its benefits are briefly discussed below.

Revenue-Sharing Concept. The primary objective of this concept is to create a public-private partnership that maximizes the usefulness and the overall value of the public asset (Florida Turnpike) by taking advantage of available resources, industry expertise, and market savvy of a private entity.

The Florida Turnpike, a multi-billion dollar asset, serving vital transportation needs of Florida is primarily financed through toll revenues. Under this concept, the Turnpike District would invite bids from private vendors for operating and managing the toll collection and support activities on a multi-year basis (initial contract term ranging from seven to ten years, with provision for two multi-year – three to five years – renewal options).

Bidders would compete on the basis of guaranteeing a fixed annual payment to the Turnpike District. The annual payment guaranteed by bidders should be based on the factors, such as current revenue stream from toll collection and concessions, projected growth in toll transactions and revenues, projected growth in vehicle miles traveled on the Florida Turnpike, new toll facilities coming on-line during the term of the contract, and any scheduled changes in the toll rates.

The Turnpike District should evaluate various proposals on a present value basis. The bidder who guarantees the highest payment, on a present value basis, during the term of the contract should be awarded the contract for operation and management of toll facilities (collection of tolls, utilities, and maintenance of toll booths, data collection and sharing, etc.). The successful bidder would retain all revenues generated from toll collection and concessions. During the entire term of the contract, the successful bidder would be required to maintain a deposit, a set percentage of the annual amount guaranteed, with the Turnpike District. The successful bidder would be responsible for collecting all necessary data related to toll collection and operations and sharing the data/information with the Turnpike District.

Additionally, the Turnpike District can incorporate other provisions, as listed below, related to sharing of responsibilities and resources into the revenue-sharing contract.

- The Turnpike District should consider providing funding support for information technology related improvements – planned investment in information technology related improvements by the Turnpike District could be used as a matching contribution to support information technology related improvements planned by the successful bidder

- Provision should be made, as part of the revenue-sharing contract, that allows the Turnpike District to suspend tolls on the Florida Turnpike during a hurricane or other life threatening emergency situations (e.g., Within one fiscal year, the Turnpike District could suspend tolls for three 24-hour periods. For additional days, the Turnpike District could pay a lump sum fee to the operator for each day of suspended tolls.)

- The revenue-sharing contract should include a provision that directs routine highway maintenance and highway construction activities to be performed in a manner that minimally disrupts the traffic flow

The Revenue-Sharing concept provides incentives to the private sector to capitalize on all opportunities for increasing the toll revenues and reducing toll collection and operations related expenses. Examples of opportunities available for increasing toll revenues and reducing toll collection and operations expenses, include:

- Accelerating the growth in turnpike customers by:
  - Maintaining safe and reliable driving conditions on the turnpike
  - Providing positive experience to patrons (courteous and knowledgeable toll collectors)
  - Reducing the wait time at the toll plazas
  - Aggressively promoting/marking benefits of using turnpike (safe driving conditions, reliable service at toll plazas, congestion free environment, superior customer service, etc.)
- Promoting the use of technology (e.g., transponders, ITS, etc.)
- Exploring alternative toll pricing (e.g., congestion pricing, frequent user discount, time of the day, etc.)
- Offering more choices at concession stands
- Reducing the toll collection and operations related costs through:
  - Maximizing the use of technology (e.g., transponders and other automated toll collection methods)
  - Reducing the need for toll collector supervisor through training and use of technology
  - Efficiently planning for and manning toll booths based on demand and traffic volume
  - Reducing costs associated with employee benefits (vacation days, holidays, health benefits, etc.)
  - Implementing a “Pay-for-Performance” incentive for improving toll collection efficiency
  - Applying “lessons learned” by other toll authorities for controlling toll collection and operations costs

The project team believes that the private sector, using various strategies mentioned above, would be able to increase the annual toll transactions by a minimum of five percent compared to the number of toll transactions under the current approach. Additionally, the private sector would be able to reduce the toll collection and operations related costs by approximately 25 percent through expanded use of technology and efficient use of available resources.

Exhibit 6-6 illustrates an example of the proposed revenue-sharing concept. For the analysis purposes, we have assumed:

- Average cost of toll collection and operations for the Turnpike District = $0.18 per toll transaction
- 425,000,000 toll transactions
- Average toll revenues per toll transaction = $0.90

Exhibit 6-6: Revenue-Sharing Concept for Toll Collection and Operation Function

Category	Current/Traditional Approach	Revenue-Sharing Approach
Number of Toll Transactions	425,000,000	446,250,000
Annual Revenues (toll collection and concessions)	$382,500,000	$401,625,000
Operations Expenses (toll collection and deposit, field investigation, data collection, financial accounting, reporting, maintenance of toll booth, utilities, etc.)	$76,500,000	$60,243,750
Capital Expenses	$15,000,000	$15,000,000
Net Revenues	*$291,000,000*	*$326,381,250*
Profit Margin @ 5% of net revenues	N/A	$16,320,000
Revenues available for debt service and maintenance / Amount guaranteed to the Turnpike District	**$291,000,000**	**$310,061,250**
Additional revenues generated annually under the Revenue-Sharing concept		***$19,061,250***
Additional revenues generated over the life of the contract (7 years)		***$133,428,750***

Benefits of the revenue-sharing concept are highlighted below:

- The present and future value of the Florida Turnpike is significantly enhanced
- More revenues available for debt service, maintenance and the future expansion of the turnpike system
- Guaranteed stream of revenues – improved bond rating
- Substantial investment in technology
- Superior customer service
- Simpler contract administration and management – in-house/consultant resources needed to manage the revenue-sharing contract are far less as compared to the current situation
- State retains ownership of the asset
- The Turnpike District could consider combining the toll collection and operations and routine highway maintenance responsibilities as part of the revenue-sharing contract

Recommendation 6: Outsource and/or transfer selected support services and other non-core functions

The FDOT is responsible for managing the state's vast transportation system, including the planning, design, construction, maintenance, and operation of all roads, bridges and transportation systems within the state-maintained transportation network. In additional to

these core responsibilities, FDOT also performs some support services, such as building maintenance, reprographic services, video production, and permitting among others.

The project team recommends that FDOT outsource the following support services and non-core functions. As an alternate to outsourcing these support services, FDOT may want to consider allowing employees, current supporting these services, to compete for these services through managed competition (FDOT could lease equipment and office space by charging a nominal fee).

Building maintenance – the Central Office Support Services provides building maintenance services. Building maintenance related services have become like a commodity – most private sector firms and government agencies have successfully outsourced building maintenance related services to the private vendor.

Reprographic services – the Central Office Support Services provides reprographic services – largest among the state agencies – to the Central Office and eight district offices. The private sector, with influx of new technology and the Internet, has transformed reprographic services. Outsourcing of reprographic services would allow the Central Office and eight district offices to take advantage of prompt, reliable, and often, cheaper reprographic services provided by the private sector.

Video production – the Public Information Office maintains a video production facility and prepares videos for variety of purposes. Considering that video production services are readily available throughout the state, the need for maintaining a video production facility within FDOT is not necessary.

Permitting – FDOT issues various permits, including access permits, drainage permits, utility permits, road closure permits, highway landscaping/vegetation management permits, banner permits, overweight/over-dimensional permits, building moving permits, outdoor advertising/billboard permits, associated with the State Highway System. The FDOT is evaluating the cost-benefits of delegating certain permitting functions (e.g., driveway, drainage permits) to local governments.

The project team recommends that FDOT delegate:

- The authority for issuing of drainage and utility permits on the State Highway System to the Department of Environmental Protection or to local governments
- The authority for issuing access permits, highway landscaping/vegetation management, and banner permits on the State Highway System to local governments

Recommendation 7: Promote the use of alternative QA/QC concepts for construction and maintenance projects

FDOT's Material Office is responsible for performing research, testing, inspection, and chemical analysis of materials and products used in the transportation infrastructure. The Materials

Office, supported by 529 positions, establishes the criteria for materials and manufactured products used in construction, and assures that all materials and products used in the construction and maintenance of Florida's roadways and bridges meet governing specifications and standards.

In our survey of the peer state transportation agencies, we found that FDOT has the highest number of materials and testing staff compared to its peer state agencies. In addition to the material testing, FDOT resident engineers and consultants closely monitor the quality and workmanship of highway construction and maintenance projects. In fiscal year 1999-00, FDOT allocated approximately $210 million for construction engineering inspection activities (includes both in-house and consultant CEI).

Recently, the State Materials office has initiated several Quality Systems and is currently actively participating in the development, implementation and continuous improvement of several core and support systems through the QC2000 program. Additionally, the State Materials office is working with various vendors and manufactures/suppliers to implement in-house procedures for quality control and quality assurance.

The project team recommends that FDOT promote the use of alternative Quality Assurance/Quality Control concepts for highway construction and maintenance projects. The alternative QA/QC concepts discussed below are successfully applied in the construction and other industries (e.g., automotive, construction, technology, etc.), and are broadly used by various state transportation agencies and private sector firms.

Examples of alternative QA/QC concepts for highway construction and maintenance projects, include:

- **Performance-based specification** – this method requires the contractor to monitor materials quality and construction workmanship to accomplish specified level of performance. As such, the level of state supervision/inspection and materials testing is somewhat less compared to the traditional construction project.

- **Pre-qualifying materials suppliers** – under this concept, the state transportation agency would work closely with materials suppliers to establish the procedures for performing the quality control, sampling, testing, and record keeping. The certified materials suppliers would be responsible for performing QA/QC checks, in accordance to established procedures. The state transportation agency would accept materials/products supplied from by the certified suppliers.

- **Performance warranties/guarantees** – this concept makes the contractor responsible for ensuring that the final product meets the specified performance standards. Warranties for materials and workmanship are common in the construction industry. Performance warranties/guarantees provide the incentive or emphasis for contractors to look at life cycle costs as opposed to initial costs alone.

Collectively, effective use of these alternative QA/QC concepts would allow the FDOT to reduce the need for having a high level of in-house resources dedicated for materials and testing, and the need for construction engineering inspection on highway construction and maintenance projects.

Recommendation 8: Automate Human Resources functions

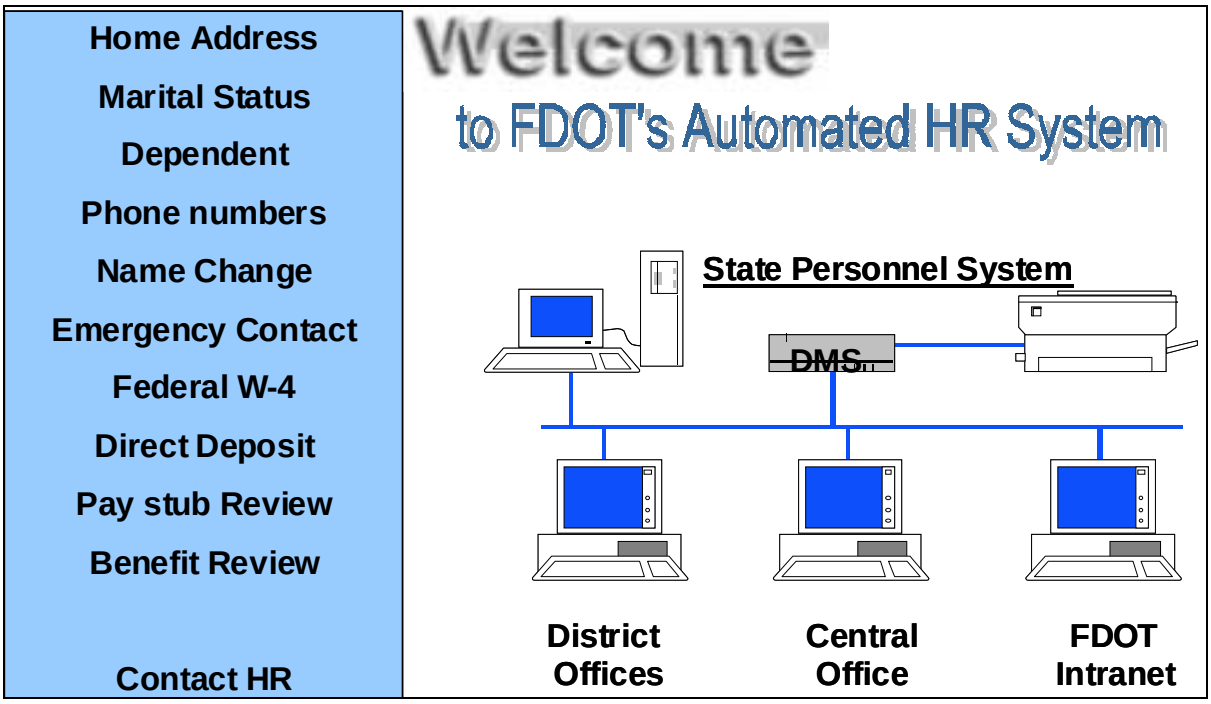
The FDOT has more than ten thousand employees. FDOT shares responsibility with the Department of Management Services (DMS) in the administration of human resources functions. For most part, responsibility for human resources functions is delegated at the state agency level; however, DMS maintains responsibility for the state personnel system including coordination of insurance benefits (including health, life and supplemental plans) for state employees and their families, establishment of classification and pay plans for state workers, and operation of the COPES personnel system.

Within FDOT, the human resources function is further decentralized at the district level, with each district responsible for managing its own human resources function in accordance with guidance provided by the Central Office. The current human resources (HR) function is highly manual, paper-intensive, and time consuming. For almost all of the basic human resources services, employees are required to fill out forms to initiate a requested change in their HR status (e.g., change of name, marital status, home address, phone number, emergency contact, health benefits, etc.).

The Internet has revolutionized HR functions and services, in terms of attracting new talent, providing employees with an easy access to HR services on-demand, and removing layers of bureaucratic hurdles. The project team recommends that FDOT automate human resources functions. Implementation of this recommendation would require FDOT and DMS to work closely to ensure that proper provisions for data integrity and data security are incorporated in the proposed automated HR system to protect the state personnel system.

The essence of our recommendation is graphically presented in the Exhibit 6-7.

Exhibit 6-7: Conceptual Plan for the Automated HR System



As presented above, the automated HR system should have the capabilities for allowing FDOT employees to update their home address, marital status, dependent information, phone numbers, name changes, emergency contract, federal tax withdrawal, and direct deposit related information on-line. Additionally, the automated HR system should allow FDOT employees to review their pay stub and benefits (health benefits, life insurance, and other supplemental plans) related information. Such a system would significantly reduce the need for maintaining separate HR staff in each district office and would boost employee morale.

7. ORGANIZATIONAL STRUCTURE

This Chapter presents the results of KPMG's assessment of FDOT's organizational structure and staffing and includes recommended strategies for improving the Department's organizational efficiency and effectiveness.

7.1 INTRODUCTION

FDOT is one of Florida's largest state agencies with over 10,000 full-time and OPS employees. The Department is led by a Secretary, who is appointed by the Governor from a list of three candidates chosen by the Florida Transportation Commission. The Secretary is supported by two line-level executive managers – an Assistant Secretary of Transportation Policy and an Assistant Secretary of Finance and Administration. (Note: The Department has drafted a reorganization and staff reduction plan that reduces staff by 2,837 positions over five years and eliminates an Assistant Secretary for District Operations)

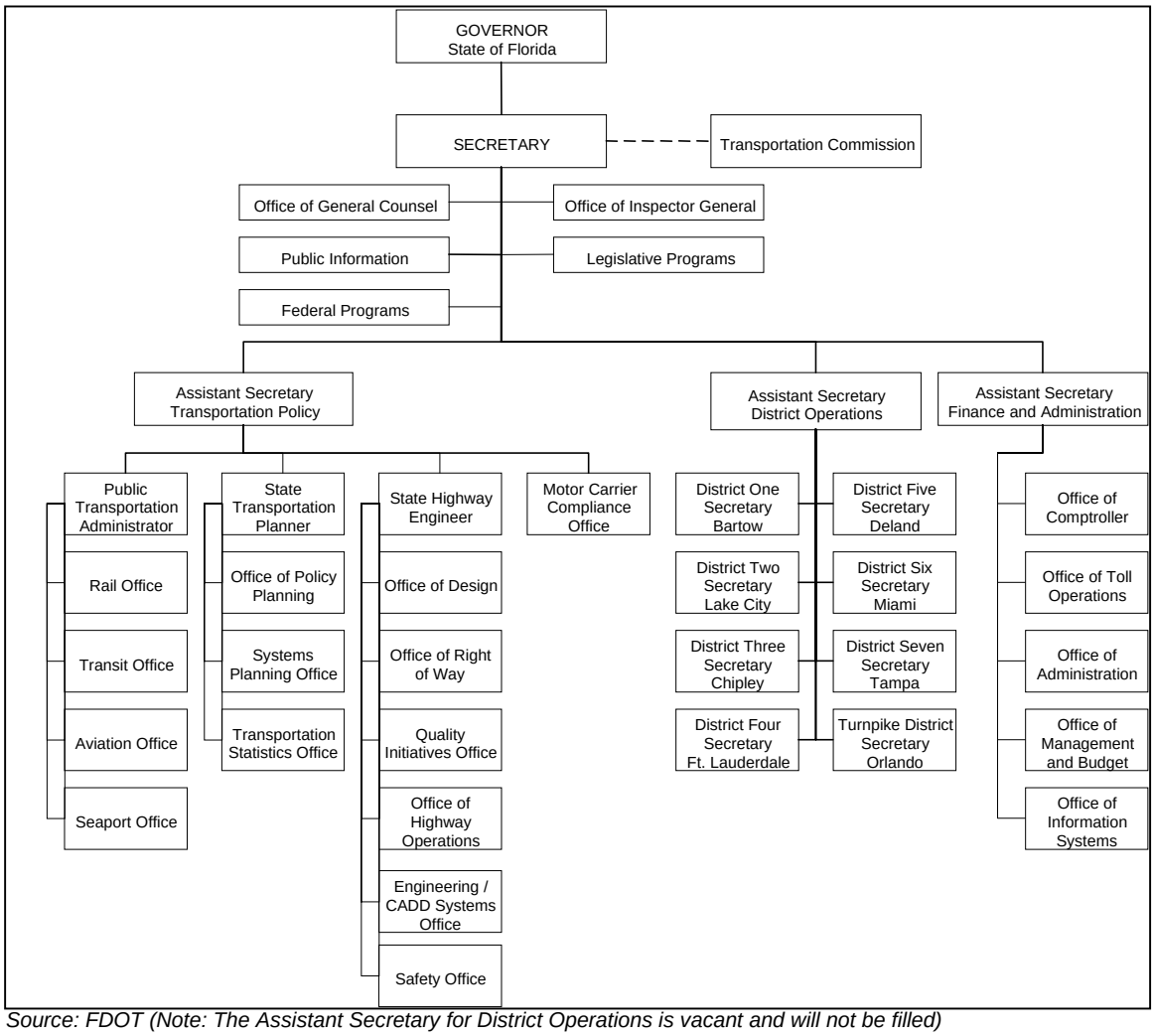
Generally, the Assistant Secretary for Transportation Policy supports the Districts with policy direction, program support and technical expertise, provided through four main offices – Public Transportation, State Transportation Planner, State Highway Engineer and Motor Carrier Compliance. The Assistant Secretary for Finance and Administration oversees four offices that provide financial and administrative services and support to the Department – Comptroller, Administration, Management and Budget, and Information Systems. The Office of Toll Operations, which provides toll collection and revenue reconciliation services to the Turnpike District and several other toll authorities in Florida, also reports to the Assistant Secretary of Finance and Administration.

Until recently, all District Secretaries reported to an Assistant Secretary for District Operations, who reported to the Secretary. This position was vacated and will not be filled (this position would be eliminated as part an organizational restructuring under consideration by FDOT). Five staff level functions also report to the Secretary:

- Office of General Counsel
- Office of Inspector General
- Federal Programs
- Legislative Programs
- Public Information

These positions and reporting relationships are presented in FDOT's current organization structure, which is detailed in Exhibit 7-1.

Exhibit 7-1: Current FDOT Organization Chart

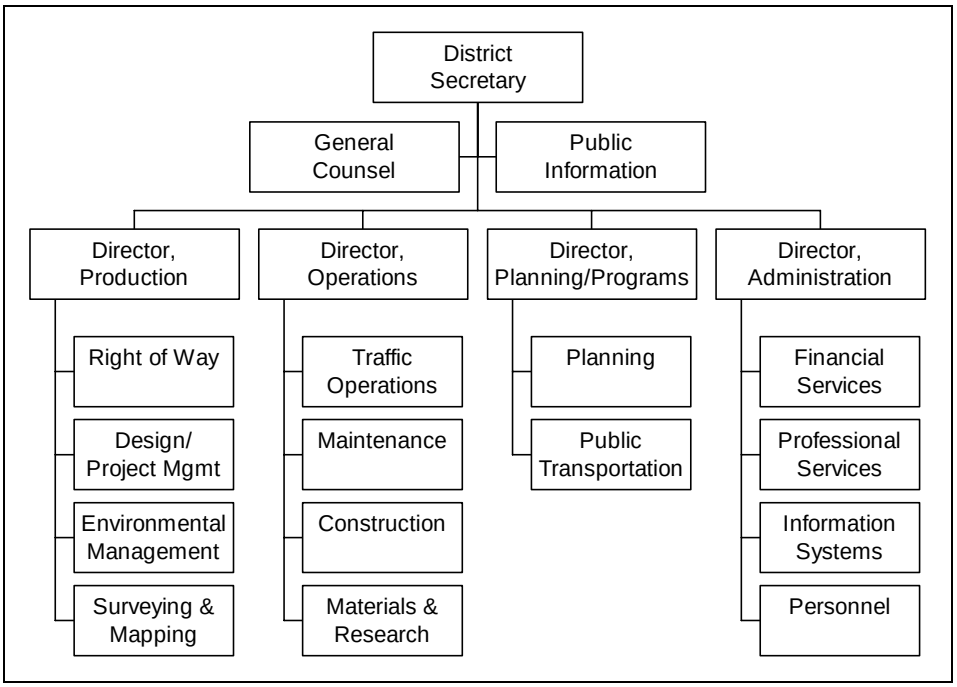


Source: FDOT (Note: The Assistant Secretary for District Operations is vacant and will not be filled)

The Department operates with a strongly decentralized organizational structure – one that assigns significant responsibility and decision-making authority to its eight District offices. 70 percent of FDOT's total work force are assigned to one of its District offices. Districts 1 through 7 are responsible for transportation planning, design and operations for a particular geographic region of the state. District 8 – the Turnpike District – is responsible for similar functions associated with the Department's toll highway facilities. Each District office is led by a District Secretary, who is supported by Directors in four key line-level offices – Administration, Planning, Production and Operations. In addition, two staff-level offices – General Counsel and Public Information – report to the District Secretary.

Exhibit 7-2 presents the organization chart for a typical FDOT District.

Exhibit 7-2: Typical FDOT District Organization Chart



Source: FDOT

KPMG reviewed FDOT's organizational structure and staffing to assess conformance with sound organizational design and management principles, including:

- Spans of control. Managers have the appropriate number of workers directly reporting to him/her – too many direct reports can be difficult for supervisors to manage, while too few direct reports may imply unnecessary layers of management.
- Lines of authority and direction. Lines of authority and direction are clearly defined so that employees understand reporting relationships and decision-making responsibilities.
- Minimal work fragmentation. Work that can be performed more efficiently by one full-time person is not distributed among several different people.
- Appropriate staffing. The organization has a proper staffing balance among departmental administrative functions and service delivery functions and a balance between management, supervisory positions, and non-management positions.
- Few redundant activities. Same or similar activities are consolidated and performed in only one part of the organization.
- Appropriately *placed activities.* Activities are performed by employees with the appropriate expertise and resources.

Recommendations for improvement are presented in the following section.

7.2 SUMMARY OF RECOMMENDED STRATEGIES

Recommendation 1: Realign and train FDOT staff to support a life-cycle approach to project delivery

In Chapter 4, KPMG recommended that FDOT re-engineer its program and project management processes, systems and organizational structure (Recommendation No. 1). Any organizational changes proposed in this re-engineering should be developed concurrently with recommended systems and process changes. However, the Department should give strong consideration to realigning and training its staff to support a life-cycle approach to project delivery. Following this approach, FDOT would designate a single project manager to oversee all phases of project development. This project manager would be supported by a team of individuals with specific knowledge or expertise needed to plan, design or construct a particular improvement.

KPMG recognizes that many FDOT projects span several years and that it may not always be possible to maintain the same project manager for all phases of the project. However, the vision behind this recommendation is for FDOT to establish project management teams, led by a designated manager, that can oversee the entire project development process – from inception through completion. By reengineering the Department's project management processes and technologies, these teams will be able to maintain continuity in project development – despite any occasional changes in project leadership.

Most private developers, utility companies and branches of the U.S. armed services use the life-cycle project management approach to plan, design and construct their respective engineering improvements. Several factors, current and proposed, support a move by FDOT to this model of project management staffing:

- FDOT already outsources most its capital program to consultants. As the Department privatizes more of this work, it is better positioned to manage the entire process with a single project manager – an individual responsible for managing all consultant contracts from planning through construction

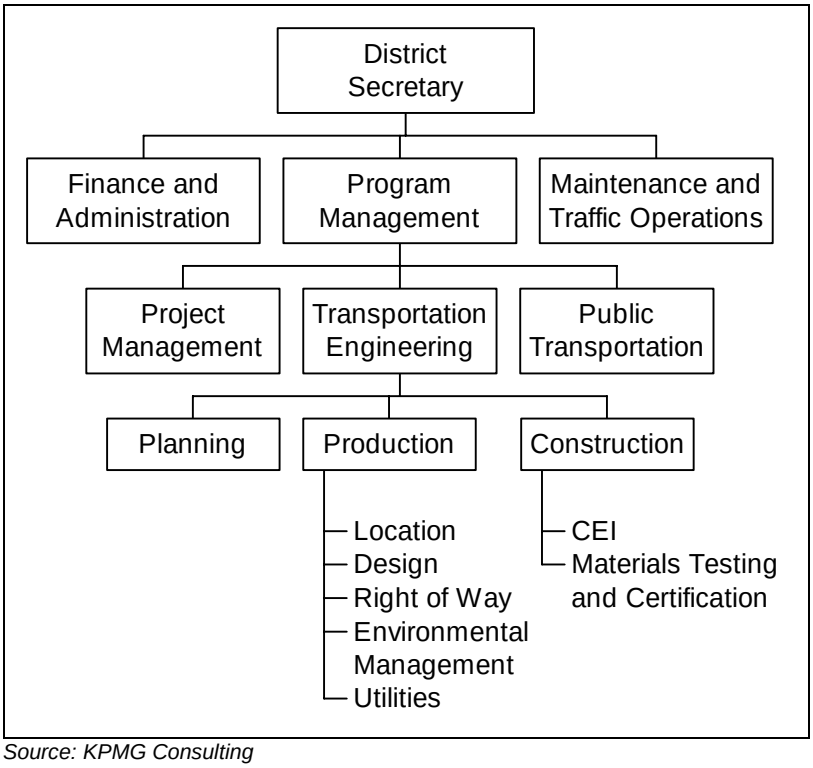
- FDOT is reducing its engineering and technical staff. With a growing capital program and fewer qualified project engineers in-house, the Department can no longer afford to designate multiple project managers to guide a project through planning, design and construction

- FDOT will be better able to implement this recommendation as it re-engineers its project management systems and processes

The organizational structure of each District would change to accommodate the life-cycle project management approach, drawing all project development activities into one work unit – the Program Management Office.

Exhibit 7-3 presents a proposed District organization chart, revised to support this alternative project management approach. Finance and Administration remains unchanged. The new Program Management Division, led by a District Program Manager, includes a group of trained Project Engineers who work out of a Project Management Section. Project team members with the requisite planning, production and construction expertise needed for a particular project are selected from the Transportation Engineering Section and assigned to a Project Engineer. The Public Transportation function is transferred to the Program Management Office. Traffic Operations and Highway Maintenance are retained in the Traffic Operations and Maintenance Division.

Exhibit 7-3: Proposed District Organization Chart



Source: KPMG Consulting

Recommendation 2: Transfer the Motor Carrier Compliance Office (MCCO) from FDOT to an organization that performs similar core functions – or – investigate alternatives to improve the MCCO operation within the Department

FDOT's Motor Carrier Compliance Office (MCCO) is responsible for enforcing state and federal laws regulating the safe operation of commercial motor vehicles and their drivers. MCCO performs these duties by ensuring "that trucks and buses operating in Florida are mechanically sound, are licensed and do not exceed size and weight limits, and that the vehicle operators are

properly qualified, licensed and driving their vehicles in a safe manner."[1] Functionally, MCCO's mission, responsibilities, organizational culture and staff are more closely aligned to the that of the Florida Highway Patrol (FHP) in the Florida Department of Highway Safety and Motor Vehicles (DHSMV). Florida could consider transferring MCCO (and its Transportation Trust Fund budget) from FDOT to DHSMV. Additionally, once MCCO is transferred, DHSMV should consider outsourcing or setting up a managed competition award to privatize operation of the state's 21 weigh stations. This recommendation compares the similarities between DHSMV and MCCO as one alternative for aligning business functions and capability.

The responsibility for enforcing commercial motor vehicle weight and safety regulations varies from state to state. However, these regulations are most often enforced by an agency other than the state DOT – commonly, the state police/highway patrol. Exhibit 7-4 summarizes commercial motor vehicle regulatory responsibilities by state.

Exhibit 7-4: Summary of Commercial Motor Vehicle Regulatory Responsibilities by State

Regulatory Function	Number of States Performing Regulatory Functions		
	State DOT	Local Police or State Police/FHP	Other State Agency
Enforce vehicle weight and size restrictions	10	25	15
Enforce vehicle safety regulations	14	25	11
Enforce vehicle/operator regulations	10	29	11

Source: FDOT, USDOT and KPMG Consulting

MCCO and FHP are similar with respect to staffing and organizational hierarchy, service area and regulatory responsibilities:

- MCCO and FHP both hire and staff law enforcement officers in the same state employment class, with matching general qualifications and salary ranges. Exhibit 7-5 presents a summary of the law enforcement personnel assigned to MCCO and the FHP

Exhibit 7-5: Summary of MCCO and Florida Highway Patrol Law Enforcement Personnel

State Agency/Division	Florida Law Enforcement Classification				
	Major	Captain	Lieutenant	Sergeant	Officer
DHSMV – FHP	12	49	142	190	1,019
DOT – MCCO	3	7	15	36	131

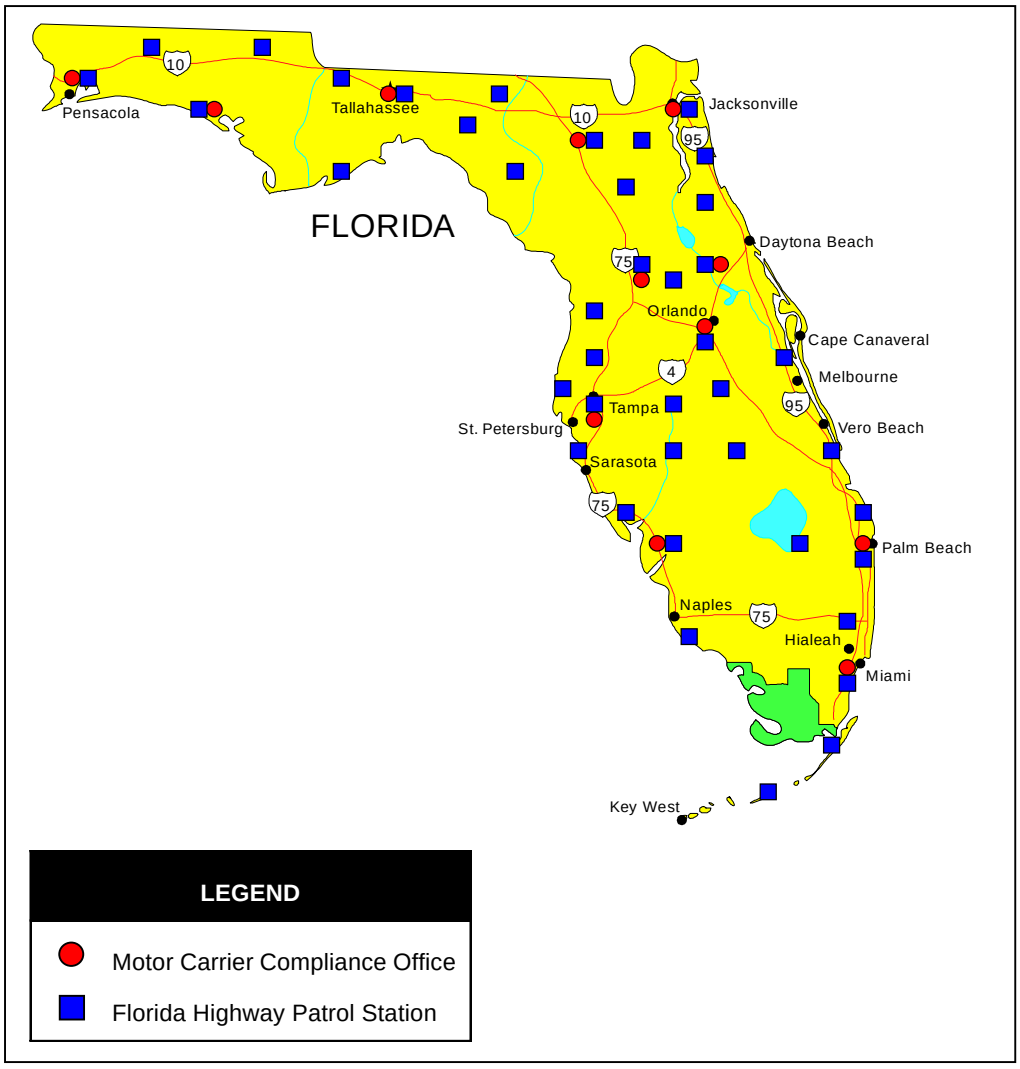
Source: State of Florida Job Search web site (http://www.myflorida.com/myflorida/jobopportunity.html)

[1] Florida Office of Program Policy Analysis and Government Accountability (OPPAGA), PB[2] Report of the Florida Department of Transportation, Motor Carrier Compliance, updated 8/31/99.

- MCCO and FHP both patrol the same state highways to enforce vehicle and operator licensing and safety regulations. FHP operates out of 47 stations, located throughout Florida. MCCO operates out of 12 field offices, all of which are located in cities where FHP is already stationed. Exhibit 7-6 shows locations for MCCO and FHP offices/stations.

- MCCO's exclusive regulatory focus is on commercial vehicles and their operators. FHP is concerned with the licensing and safe operation of all vehicles and drivers. Although the focus and extent of enforcement varies between these two organizations, the regulatory functions provided are very similar. Exhibit 7-7 presents a comparison of these responsibilities.

Exhibit 7-6: Location of MCCO and FHP Offices/Stations



FDOT should consider transferring all MCCO staff and statutory responsibilities to FHP. Fines collected by the FHP for overweight/oversize vehicle violations or other infrastructure damage incurred by motor carriers or their operators would be returned to FDOT. These fine revenues

would provide partial funding to FDOT for any additional maintenance and repair work required to address infrastructure damages caused by motor carriers. All other current MCCO funding, including other fine revenues not associated with damages to the state highway system, would be transferred to FHP.

If MCCO's staff, funding and *statutory responsibilities* were transferred from FDOT to the FHP , Florida could potentially gain the following organizational efficiencies and cost savings:

- Decreased administrative costs (e.g., human resources, financial, etc.) through clerical/administrative staff reductions, resource sharing and procurement efficiencies
- Decreased cost of vehicle and equipment acquisition and maintenance through staff reductions, resource sharing and procurement efficiencies
- Reduced facility use costs through sale of MCCO offices and/or facility-cost sharing with FHP
- Enhanced organizational knowledge sharing and learning – processes, practices, technology, etc.

Exhibit 7-7: Comparison of Related MCCO and FHP Responsibilities

Responsibility	DOT – MCCO	DHSMV – FHP
Register Commercial Motor Vehicle Carriers		✓
Check vehicle license and registration	✓	✓
Check vehicle operator license	✓	✓
Conduct vehicle safety inspections and issue citations for deficiencies noted	✓	✓
Monitor and issue citations for unsafe vehicle operation	✓	✓
Enforce vehicle weight and size restrictions	✓	

Source: KPMG Consulting LLC

Once MCCO is transferred, DHSMV should evaluate alternatives for outsourcing the operation of the state's 21 weigh stations. DHSMV may privatize this function directly or it may set up a managed competition option that provides state employees with an opportunity to compete for the right to continue providing these services (currently, MCCO staffs approximately 150 civilian weigh station inspectors and another 30 administrative staff at its weigh station facilities).

A critical factor for successfully implementing this recommendation is the transfer and acknowledgement of the statutory responsibility. To meet this responsibility (and its associated performance measures) FHP would have to dedicate and maintain the trained and qualified staff. In considering this recommendation, FDOT expressed concern that MCCO staff would be diverted to other FHP tasks and responsibilities.

KPMG Consulting acknowledges that the recommendation to relocate MCCO is not a simple issue. Over the past several years, the state has evaluated proposed plans to transfer MCCO to various other agencies, including DHSMV and the Department of Agriculture and Consumer Services. FDOT does not support the transfer of the MCCO and has prepared a paper outlining its position. That paper is included (Appendix F) to allow thorough consideration of this recommendation.

As an alternative to implementing this recommendation as stated, the FTC may wish to conduct a study to fully evaluate the organizational and operational issues of where MCCO business functions should be assigned. This study can include a review of these business functions to identify opportunities for improving MCCO operations, regardless of where it is housed within Florida state government. Proposed improvement strategies that might be further studied include:

- Automated inspection of overweight vehicles (e.g., use of bridge weighing systems)
- Privatization of weigh stations or transfer of operations to local law enforcement agencies
- Use of automated, roadside, payment options for fines/citations
- Stronger cooperation and coordination between MCCO and SHP

Recommendation 3: Establish baseline in-house staffing levels and skills requirements for FDOT's core functional areas (a Resource Model)

To comply with the Governor's mandate for reducing state government work force levels by 20 percent over the next five years, FDOT recently reviewed its in-house staffing needs and identified opportunities for reducing staff – goals that it plans to attain primarily through increased outsourcing of selected business functions and through attrition of existing positions. As cited in earlier Chapters, FDOT has already outsourced a significant percentage of its planning, preliminary engineering and construction engineering and inspection (CEI) work to consultants. As FDOT's consultant program expands, it is critical that the Department preserve its resident technical knowledge and expertise with core staff in major functional areas (e.g., planning, survey and mapping, environmental, right-of-way, highway design, structures, CEI). To accomplish this objective the Department should conduct an objective, strategic analysis of its current and long-range staffing needs to evaluate, establish and preserve baseline staffing levels and skills in these areas. FDOT can develop this "resource model" through the following activities:

- Determine baseline staffing levels and skills that the Department requires to accomplish the following critical tasks:
  - Evaluate, develop and implement statewide transportation policy
  - Evaluate transportation system conditions and operating characteristics and establish program funding levels to address confirmed systems needs
  - Evaluate and adopt appropriate departmental policies and procedures
  - Evaluate new materials and alternative maintenance or construction practices, contracting methods, etc.

  - Evaluate and adopt design standards and specifications
  - Assess resource requirements and establish consultant program funding requirements
  - Award and administer consultant contracts
  - Other critical tasks identified by the Department
- Adopt and implement a career and succession planning strategy to ensure that the Department acquires and maintains these prescribed technical staffing levels and skills (see Recommendation 4)

Recommendation 4: Establish a career and succession planning strategy for managers and leaders at FDOT

FDOT has provided selected managers and engineering staff with structured technical and leadership training, including the following:

- DOT Leadership Academy – Leadership training course provided by the American Association of State Highway and Transportation Officials (AASHTO) and offered to selected FDOT management personnel
- P.E. Program – A training program for younger engineers, the P.E. program provides a structured series of rotational assignments through all major FDOT technical areas
- Certified Public Manager – certificate program in public administration offered by selected Florida universities

However, the Department has not established the means to identify potential future leaders and outstanding technical professionals, give them appropriate training and direction, keep them within the organization and arrange for appropriate successors should they retire or leave. FDOT needs to establish a logical career and succession planning strategy to ensure that it always has capable leaders and managers to direct the organization.

A strong career and succession planning strategy for FDOT should provide for the following actions:

- Identify potential future leaders and key technical staff:
  - Develop addendum or modification to the Department's annual performance evaluations or Individual Training Plans (ITP), to provide option for employees to request consideration for technical and management track opportunities
  - Identify employees that indicate an interest in technical and management track opportunities (responses must clearly indicate employee willingness to relocate and assume various rotational assignments)
  - Provide structured process to collect input from current FDOT managers recommending employees for technical and management track opportunities
  - Identify and document matches between manager recommendations and employees expressing interest in technical and management track opportunities
- Develop a career track, with a measured series of rotational assignments that provides selected employees with opportunities to improve management skills and enhance understanding of FDOT business operations
  - Designate pool of candidates for technical and management tracks

  - Identify positions throughout the Department that would provide selected employees with an opportunity to practice technical and management skills and learn all aspects of FDOT business operations
  - Pursue rotational assignments/exchanges with private businesses
  - Plan for an anticipated migration of FDOT staff into the private sector and integrate a strategy to leverage their understanding of the Department, planning, design, and construction needs
- Develop proactive strategy for recruiting and retaining skilled professional staff in key technical and management track positions as they occur. This could include establishing a "Transportation Academy" for development and maintenance of critical skills. Strategies would include:
  - Identify critical leadership, project management, and technical positions
  - Determine when key leadership and technical positions are likely to become vacant (e.g., as incumbents indicate retirement plans, or as promotions are expected to create vacant positions)
  - Develop classification and compensation strategies that attract and retain skilled staff and allow the Department to operate effectively at minimum required staffing levels
  - Establish formal curricula to support critical staff career development
  - Establish a minimum service commitment (typically two years) to participate in the academy training and development program
  - Annually evaluate and rank potential successors to these positions
- Investigate approaches for an "Executive on Loan" program to leverage private sector thought leadership, integrate business approaches to FDOT operation, and mentor future Department leaders

By charting and implementing a proactive career and succession planning strategy, FDOT can sustain the managerial and technical expertise it will need to lead the Department now and in the future.

Recommendation 5: Revise measures used to assess FDOT's management and operational performance, adding focus and emphasis on outcomes

FDOT uses various measures to assess the Department's progress in meeting specific financial and operational goals. Historic performance and production data reported in the Department's March 2000 Business Plan include some of the following examples of these measures:

- Executed 97 percent of planned consultant contracts
- Let 98 percent of planned construction projects
- Achieved 103 percent of maintenance rating objective
- Achieved 70 percent of planned public transportation capacity improvements

FDOT is diligent in measuring these and many other outputs. However, to assess the Department's overall performance, FDOT should measure outcomes as well. Examiners from the Florida Sterling Council made this same observation after completing an assessment of FDOT in 1997. In its 1998 Feedback Report, Sterling examiners recommended that FDOT:

"…. develop a set of measurements that reflect the outcome and results needed to satisfy its numerous stakeholders. Until such a set of measurements exist, it will be difficult to assess whether performance is leading the organization toward the achievement of stakeholder needs."[2]

To determine the extent to which the Department is effectively and efficiently providing services that stakeholders value most, FDOT should develop a set of performance measures that emphasizes outcomes. The Department should also develop a system for continuously tracking its success in meeting these outcomes. To identify and track these measures, FDOT should consider the following issues:

- Which functions and services provided by FDOT are value drivers – i.e., matter most to the Department's stakeholders?
- What operational and financial measures best assess the Department's performance in affecting these value drivers?
- Are proposed measures quantifiable? Can they be reliably measured and reported?
- Are measures balanced to achieve desired behavior? Or do proposed measures have the potential to drive unintended consequences?
- Do proposed measures indicate the level of resources provided or time required to achieve desired results?
- Will proposed measures help FDOT sustain continuous organizational learning and innovation?

Recommendation 6: Consolidate staff in offices that perform the Department's various QA/QC functions

FDOT provides a wide range of internal quality assurance and quality control (QA/QC) services as a means to ensure uniform, consistent and optimum application of policies and procedures, and to provide a feedback mechanism for continuous improvement. As Exhibit 7-8 indicates, the Department meets its QA/QC service goals through various approaches conducted by several different work units within the Department.

Exhibit 7-8: FDOT Work Units Providing QA/QC Functions

FDOT Work Unit Providing QA/QC Function	Performance Audits	Performance Measures	Quality Reviews & Special Projects
Office of the Inspector General	✓		✓
Quality Initiatives Office (State Highway Engineer)		✓	✓
Office of Management and Budget		✓	
Office of Policy Planning		✓	

Source: FDOT

[2] Sterling Quality Challenge, FDOT Feedback Report, May 1998

Because FDOT's QA/QC practices are fragmented among several different divisions and offices, the Department may not be providing these services in the most cost-effective and efficient manner. The Department should re-evaluate the QA/QC functions provided by each of these work units, identify efficiencies and consider options for eliminating some functions, and consolidating the rest under a single Office of Quality Initiatives, reporting to the Assistant Secretary for Finance and Administration.

Recommendation 7: Consolidate area engineer positions

FDOT staffs a number of area engineer positions – individuals operating out of FDOT's Office of the State Highway Engineer, that provide technical expertise and guidance to District Offices in the area of highway design, maintenance and operations, and construction. The knowledge sharing capabilities provided by this network of area engineers is valuable. However, the Department can consolidate and reduce the number of these positions and still provide this technical advisory function.

With some exceptions, each District is assigned its own designated area engineer for design, maintenance and operations, and construction. FDOT can reduce this number and reorganize to provide each District with a single area engineer, who is appropriately trained and generally knowledgeable in all functional areas. Each of these area engineers would act as a resource and liaison to the Districts – providing policy direction and getting answers to technical questions from throughout the state. These individuals would not necessarily carry in-depth practical experience and technical expertise in each discipline, but would leverage the Department's collective experience by linking Districts with staff that do have the appropriate knowledge and expertise. The Department should also designate three area engineers who specialize in each particular functional area. These specialists can be called upon to provide Districts with expertise on an as-needed basis. By consolidating and reducing the number of Central Office area engineers that serve District offices, FDOT can eliminate ten area engineer positions.

Recommendation 8: Consider "corridor management" approach as an alternative to FDOT's current District organization

Over time, FDOT has altered the geographic boundaries of its District offices to accommodate the continually changing needs of its stakeholders. Today's District boundaries reflect the Department's efforts to establish regional parity with respect to a number of diverse factors that influence workload, including capital program size, total system lane miles and number of bridges, daily vehicle miles traveled, geographic area and estimated population.

Exhibit 7-9 summarizes these key workload figures for each of FDOT's seven geographic District offices.

Exhibit 7-9: Comparison of Selected District Workload Factors

District	FY 99//00 Letting Plan (millions)	Total Lane Miles	Number of Bridges on the SHS	Daily Vehicle Miles Traveled (thousands)	Geographic Area (sq. miles)	Estimated Population
District 1	$90.8	5,570.5	905	31,044.5	11,629	1,984,780
District 2	$197.1	7,749.4	1,136	38,044.7	11,865	1,603,379
District 3	$175.4	6,377.2	793	24,666.4	11,378	1,218,650
District 4	$185.8	5,150.3	723	42,361.1	4,837	2,890,693
District 5	$172.2	6,647.6	889	47,468.6	8,282	2,734,007
District 6	$114.7	2,628.7	566	26,957.1	2,989	2,175,960
District 7	$127.3	3,919.3	633	31,115.6	3,177	2,393,006

Source: FDOT

The Department's current District boundaries are satisfactory today, as they support a balanced organizational hierarchy through which FDOT can plan and execute its work program. However, as the Department further develops the FIHS, constructs the state's ITS network and sets up asset management contracts to maintain these systems, major corridors become the backbone of Florida's transportation system, and District boundaries have less significance. To address these impending changes, FDOT should initiate a study to objectively evaluate the pros and cons of migrating to a decentralized organization oriented along the state's major FIHS corridors.

Recommendation 9: Discontinue inspection of private airports, rail tracks and railroad equipment

FDOT is currently required by Florida Statute and Florida Administrative Code to inspect and license over 260 private airports in the state each year.[3] Similarly, Florida Statutes require the Department to inspect the physical conditions of tracks, locomotives and other rolling stock for any private railroad operated wholly or in part in the state.[4] Through a cooperative agreement with the Federal Railroad Administration (FRA), FDOT rail safety inspectors maintain FRA employment qualifications and conduct inspections according to the federal requirements on the FRA's behalf. Each year, FDOT rail inspectors perform safety inspections on 5,000 miles of track, 3,000 turnouts, 14,000 freight cars and 500 locomotives.

FDOT should pursue changes in state statute that remove the Department from its responsibility to inspect private airports. In lieu of this inspection requirement, the Department could request that the private airport owners certify to FDOT that the facility meets all applicable

[3] Florida Statute, Chapter 330; Florida Administrative Code, Section 14-60
[4] Florida Statute, Section 351.36

safety and operations standards. Implementing this recommendation would allow FDOT to eliminate four Aviation Office inspector positions.

Similarly, the Department should pursue changes in state statute that eliminate the current requirement for FDOT to directly inspect private railroad facilities. As an alternative, the Department should assume a limited role of documenting whether private railroads have established and are following acceptable procedures for ensuring compliance with federal safety regulations. Consistent with these proposed changes in state statute and code, FDOT should re-evaluate and revise or void its existing agreement with FRA.. The Department should retain its responsibility for inspection of railroad grade crossings. This recommendation will allow FDOT to eliminate six rail inspector positions and extricate itself from liability for inspecting private airport and rail facilities.

The Department would retain responsibility for supporting emergency evacuation capability using these inter-modal transportation facilities. To effectively meet that responsibility, the Department would need a strategy to access inspection data to obtain availability, status, and condition for these inter-modal facilities.

7.3 PROPOSED ORGANIZATION STRUCTURE

Implementation of the recommendations presented in this Chapter and in other parts of this report will result in changes in FDOT's organizational structure – both at the Central Office and District level – including the planned reorganization and reduction strategy. This section presents a summary of these changes.

7.3.1. Central Office

A proposed organization chart for FDOT's Central Office is presented in Exhibit 7-10. Notable changes in this organization structure include:

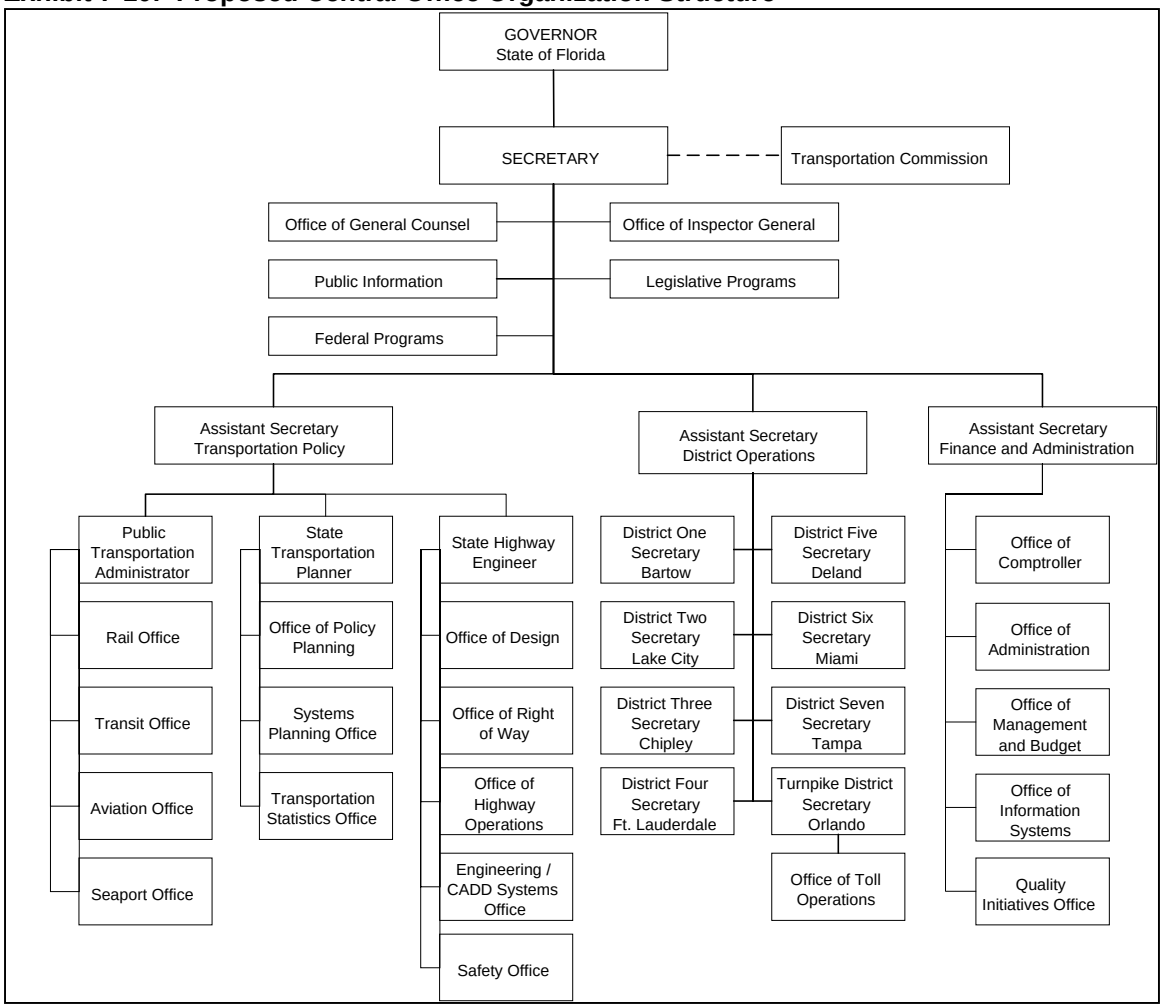
- Transfer the Motor Carrier Compliance Office (MCCO) staff and responsibility to an organization that performs similar core functions

- Consolidating all FDOT QA/QC functions into a single Quality Initiatives Office, reporting to the Assistant Secretary of Finance and Administration

- Relocating the Office of Toll Operations (OTO) from the Assistant Secretary of Finance and Administration to the Turnpike District (Elements of this approach are in the Departments reorganization strategy)

KPMG also recommends that FDOT fill the vacated Assistant Secretary for District Operations position. Allowing all District Secretaries to report directly to either the Department Secretary or to the Assistant Secretary of Transportation Policy is inadvisable, as it imposes an unreasonably high span of control on either position.

Exhibit 7-10: Proposed Central Office Organization Structure

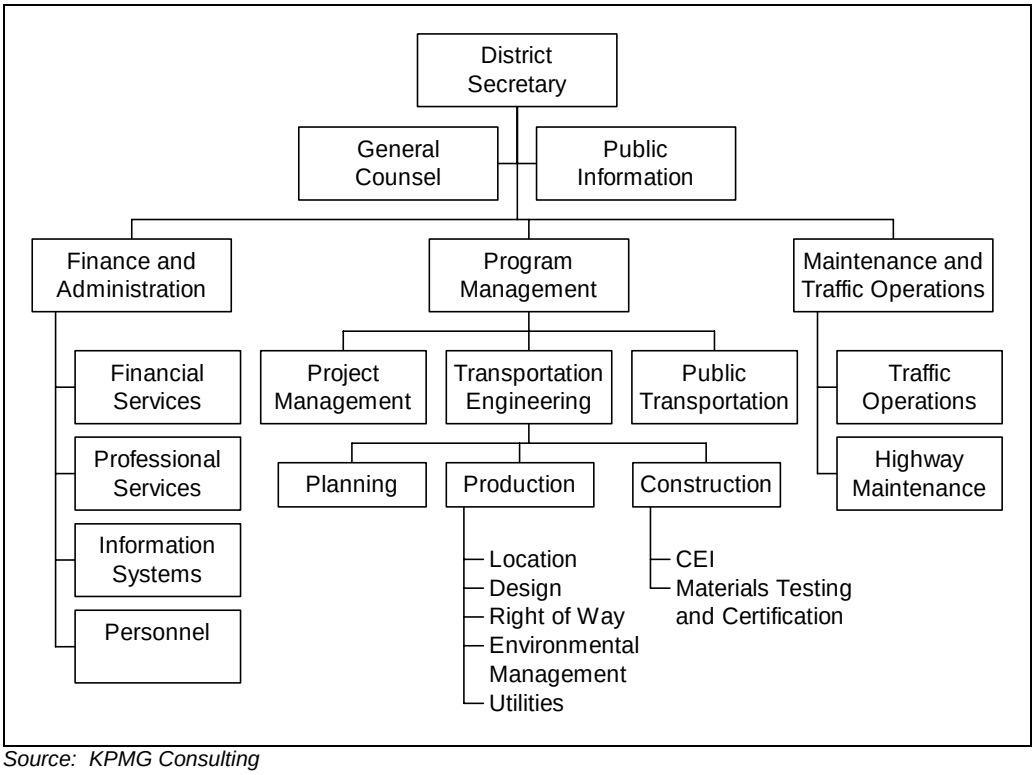


Source: KPMG Consulting

Districts

A proposed organization chart for a typical FDOT's District Office is presented in Exhibit 7-11. The most significant change in the District Office organization structure is the consolidation of all capital project development functions in a new Program Management Section (see Recommendation 1, this Chapter for details).

Exhibit 7-11: Proposed Organization Structure for Typical FDOT District Office



Source: KPMG Consulting

7.4 SUMMARY OF POTENTIAL SAVINGS

The project team estimated the potential benefits of the proposed recommendations presented throughout this report. Some recommendations can be accomplished as a part of the normal business operations of the Department. Others may require a one-time or on-going investment to generate the efficiency and effectiveness benefits. Many benefits with improved responsiveness, accountability, and quality service are not quantified but should provide long-term economic and resource management value. A number of recommendations could have significant cost-benefit impacts that could not be readily quantified. Many of these recommendations involve policy decisions of the Department. Additional work may be required to further evaluate the various options and potential costs-benefits.

For the purpose of this analysis, the project team has presented potential saving of in-house and consultant resources as FTE (Full Time Equivalent) staff positions.

Exhibit 7-12 presents a brief summary of potential cost-benefits of the proposed recommendations.

Exhibit 7-12: Cost-Benefits Evaluation of the Proposed Recommendations

Reference	Recommendation	Potential Cost Savings / Benefits
Chapter 3 Recommendation # 1	Strategies for augmenting STTF revenues	These funding strategies are intended to lessen the FDOT's reliance on the state and federal fuel taxes and bridge the projected funding gap in the FIHS 20 year capital improvement plan in part. A detail cost/benefit analysis should be performed as a part of further evaluation of these revenue enhancement strategies.
Chapter 3 Recommendation # 2	Establish a threshold for supporting funding needs for the non-highway modes through STTF	This is a policy recommendation presented in part due to the referendum passed in the latest election regarding the high-speed rail. Florida Statutes 206.46(3) requires FDOT to allocate minimum of 15 percent of its annual budget for public transportation. Intercity/high-speed rail could require millions of dollars worth of investment during the next several years. Any increase in the budget allocation for public transportation and other modes could potentially direct funding away from important highway projects.
Chapter 3 Recommendation # 3	Planning process should take into consideration expected available funding for the planned expansion of the FIHS	FDOT estimated FIHS needs of $47 billion by 2020. During this same period, revenues available for the FIHS are estimated at $18 billion, leaving an estimated shortfall of $29 billion by 2020. The projected drop in fuel tax revenue is likely to further exacerbate the funding shortfall by another $3 billion by 2020. Additionally, the current process does not clearly identify potential impacts of not funding almost 2/3 of the projected FIHS needs. Taking available funding to finance the future capital projects into consideration would make the current planning process more relevant. FDOT and its stakeholders would have a realistic account of capital improvement program that is achievable and manageable.
Chapter 4 Recommendation # 1	Re-engineer FDOT's program and project management processes, systems and organizational structure	This recommendation, along with recommendations for realigning FDOT staff to support a life-cycle approach for project delivery (Chapter 7 – Recommendation # 1) and establishing baseline in-house staffing levels and skills requirements (Chapter 7 – Recommendation # 3), is intended to profoundly change FDOT's program and project management processes, systems and organizational structure. Presently, there are approximately 3,700 FTEs allocated for planning, engineering design, right-of-way, traffic engineering,

Reference	Recommendation	Potential Cost Savings / Benefits
		materials research and construction functions. As mentioned throughout this report, many of these functions are heavily outsourced. Re-engineering FDOT's current program/project development and delivery processes would allow FDOT to: • Effectively predict, mitigate and manage project cost and time overruns • Make more informed resource planning and allocation decisions • Accelerate project schedule through efficient and effective use of available resources FTE Savings: • Implementation of these recommendations could collectively reduce the requirement for in-house resources by minimum of 10 percent or equivalent of 370 FTE positions
Chapter 4 Recommendation # 2	Consider legislative changes and additional funding assistance to encourage MPOs to collaborate on regional projects	FDOT plays a very critical role in maintaining and promoting Florida's economy through improved mobility and safety on the State Highway System. Adopting recommended legislative changes and providing financial assistance to MPOs could: • Encourage MPOs to collaborate on regionally significant projects • Encourage two or more smaller MPOs to merge • Allow MPOs to designate voting representatives from other interest groups • Allow FDOT to expedite regionally significant projects
Chapter 4 Recommendation # 3	Streamline the process for certifying projects as Type 2 Categorical Exclusions	On average, FDOT takes between 12 to 24 months to process and approve environmental reviews – almost two to four times longer than other DOTs. Streamlining the current environmental review process would allow FDOT to accelerate its NEPA reviews and shorten the project development cycle for important highway projects. FTE Savings: • 50 projects per year x 200 hours/project savings (5 FTEs x 40 hours per project) would result in saving of 10,000 hours each year • 10,000 hours annually translate into 5-6 FTE positions

Reference	Recommendation	Potential Cost Savings / Benefits
Chapter 4 Recommendation # 4	Accelerate the process for awarding professional service contracts	FDOT outsource a large majority of its planning, engineering design, right-of-way, and construction engineering inspection activities. Each year, FDOT issues more than 425 professional services contracts for these activities and on average, the contract award process takes between six to nine months. FTE Savings: • 425 projects per year x 40 hours/project savings (4 FTEs x 10 hours per project) would result in saving of 17,000 hours each year • 17,000 hours annually translate into 8-10 FTE positions
Chapter 4 Recommendation # 5	Automate and centralize contract advertising and letting functions for all construction contracts	Presently, the contract advertising and letting functions are handled by the Central Office and eight District Offices depending upon the type of project. Automating and centralizing contract advertising and letting functions for all types of contracts would allow FDOT to: • Automate and consolidate the responsibilities currently assigned to each District's Contracts Administrator (e.g., advertising projects, conducting bid openings, reviewing bids, posting bid tabulations, etc.) • Offer "One-Stop" process for contract advertisement, bid submission, and contract letting for all types of contracts FTE Savings: • 1,000 contracts per year x 40 hours/project savings (2 FTEs x 20 hours per project) would result in saving of 40,000 hours each year • 30,000 hours annually translate into 21-24 FTE positions
Chapter 4 Recommendation # 6	Simplify design and plan preparation requirements for 100 percent state-funded projects	Almost one-third of the FDOT's FY 1999-00 construction program consisted projects, worth more than $560 million, that were either 100 percent financed through state funds or turnpike projects. These projects do not have to follow federal requirements, as they do not rely on federal funds. Simplifying design and plan preparation requirements for these projects would allow FDOT to: • Reduce project costs by not following federal requirements • Reduce project development time – shorter engineering and design schedule and shorter environmental review/approval process FTE Savings:

Reference	Recommendation	Potential Cost Savings / Benefits
		• 100 projects per year x 200 hours/project savings (5 FTEs x 40 hours per project) would result in saving of 20,000 hours each year • 20,000 hours annually translate into 10-12 FTE positions
Chapter 4 Recommendation # 7	Improve FDOT's utility location and relocation capabilities	Utility conflict is identified as a single major source for project cost and time overruns. As mentioned in the report, each one percent of project cost overrun costs FDOT approximately $8 million. Improving FDOT's current utility location and relocation capabilities would allow FDOT to potentially reduce costs associated with construction delays caused due to utility conflicts.
Chapter 6 Recommendation # 1	Expand the use of alternative/innovative contracting methods for construction contracts	Expanding the use of alternative/innovative contracting methods would be beneficial in terms of: • Controlling project cost and time overruns • Minimizing inconvenience and disruption to the traveling public, area businesses and residents • Reducing project oversight – construction engineering inspection – related costs <u>FTE Savings</u>: • As discussed in the report, the use of alternative/innovative contracting methods has proven to be beneficial in term of lower Construction Engineering Inspection (CEI) costs and reduced project cost and time overruns. • Implementation of this recommendation has a significant potential for FTE savings. For example, lump sum and design-build contracts would require lower FDOT oversight, and these contracts are more likely to be completed on time and on budget compared to a traditional contract. • A detail cost/benefit analysis would be required to determine potential FTE savings. However, for the purpose of this report, the project team has estimated that FDOT could save between 15 to 20 FTE positions through expanding the use of alternative/innovative contracting methods.
Chapter 6 Recommendation # 2	Expand the use of Asset Management-based contracts for highway maintenance	Each year approximately 600 new contracts are issued and another 400 contracts are renewed for highway maintenance related activities by FDOT. Through expanding the use of Asset Management, FDOT could

Reference	Recommendation	Potential Cost Savings / Benefits

		reduce the number of highway maintenance contracts issued and renewed each year. A goal of reducing highway maintenance contract by 75 percent would allow FDOT to:
		• Consolidate various highway maintenance activities under one performance based contract serving multiple districts/regions
		• Potentially reduction in highway maintenance costs
		• Reduce contract administration and management related activities:
		  o Lower number of maintenance contracts advertised and awarded
		  o Lower number of work orders issued
		  o Lower number of payment request processed
		• Reduce the level of contract oversight
		• Efficient use of in-house maintenance staff
		<u>FTE Savings</u>:
		• The project team estimated that FDOT would be able to consolidate approximately 750 highway maintenance contracts, over the next 12 to 18 month period, through the use of Asset Management-based contracts. Additionally, for each maintenance contract consolidated, FDOT would be able to save approximately 150 hours:
		  o 2 FTEs x 30 hours each for contract preparation, advertisement, contract bidding, evaluation and selection activities
		  o 1 FTE x 30 hours for contract administration throughout the life of the contract
		  o 1 FTE x 60 hours for contract management (issuance of work orders, contract oversight, payment request review and processing, etc.)
		• 750 contracts x 150 hours/contract savings would result in saving of 112,500 hours annually
		• 112,500 hours annually translate into 62-68 FTE positions
		<u>Additional FTE Savings</u>:
		• As indicated in the comparative analysis, FDOT has more maintenance staff on a per lane-mile basis, compared to its peer states – taking into account the level of outsourcing

Reference	Recommendation	Potential Cost Savings / Benefits
		and maintenance responsibilities. Presently, FDOT outsources approximately 70 percent of all highway maintenance activities. The expanded use of Asset Management based contracts would allow FDOT to reduce in-house maintenance staff. • The project team estimated that FDOT could significantly reduce its in-house maintenance staff through expanded use of the Asset Management based contracts for highway maintenance. A detail staffing analysis should be performed to identify in-house maintenance positions that would be reduced as a part of implementing this recommendation.
Chapter 6 Recommendation # 3	Consider grouping of professional services contracts to establish enhanced regional coverage	Each year approximately 425 contracts are awarded for professional services. In accordance with the Florida Statutes, these contracts are awarded on the basis qualification followed by price negotiation – a very time consuming and resource intense process. Grouping of professional services contracts would allow FDOT to: • Consolidate contracts with similar activities to provide a greater regional coverage and potential cost savings • Reduce the contract advertisement, selection, negotiation, administration and management related activities • Maximize utilization of in-house resources <u>FTE Savings</u>: • The project team has assumed that FDOT would be able to consolidate approximately 30 percent of professional services contracts (125 contracts). Additionally, for each professional services contract consolidated, FDOT would be able to save approximately 200 hours: o 2 FTEs x 20 hours for contract preparation and advertisement o 1 FTE x 20 hours for bid evaluation and tabulation o 4 FTEs x 20 hours for short listing and orals o 2 FTEs x 20 hours for price/hours negotiation o 1 FTE x 20 hours for contract management during the life of the contract • 125 contract x 200 hours/contract savings would result in saving of 25,000 hours annually • 25,000 hours annually translate into 13-15 FTE positions

Reference	Recommendation	Potential Cost Savings / Benefits
Chapter 6 Recommendation # 4	Change the Florida Statutes for Right-of-Way acquisition to reduce cost and time	Presently, the ROW acquisition process is supported by more than 450 FTEs, including 100 plus legal and support staff. Recommended changes in the Florida Statutes for Right-of-Way acquisition are intended to reduce the time and cost for Right-of-Way acquisition process. FTE Savings: • The project team has assumed that implementation of recommended changes in the Florida Statutes combined with outsourcing of selected property condemnation casework would result in 10 percent efficiency gain. • A 10 percent efficiency gain could reduce the requirement for in-house ROW resources by: o 35 FTEs savings in ROW staff and support staff o 10 FTEs savings in legal and support staff
Chapter 6 Recommendation # 5	Transfer the Office of Toll Operation function to the Turnpike District Outsource the Toll Collection to private vendor(s) using the Revenue-Sharing Concept	Implementation of this recommendation would allow the Turnpike District to fully integrate the Toll Collection function. Additionally, outsourcing of the Toll Collection function under the Revenue-Sharing Concept would allow the Turnpike District to: • Accelerate the growth in turnpike customers • Promote the use of latest technology (transponders, ITS) • Explore alternative toll pricing • Expand concession services and revenues • Reduce costs associated with toll collection function • Maximize toll revenues • Retain the ownership of the asset while enhancing the present and future value of the Florida Turnpike FTE Savings: • The project team estimated that implementation of this recommendation would allow FDOT/Turnpike District to reduce essentially all of 918 OTO staff • Another 200 FTE OTO positions, currently supporting other state toll (non-turnpike) facilities, could be outsourced as a result of implementing this recommendation.
Chapter 6 Recommendation # 6	Outsource and/or transfer selected support services and other non-core functions	Outsourcing and/or transferring selected support services and other non-core functions, such as building maintenance, reprographic services, video production and permitting, would allow FDOT to:

Reference	Recommendation	Potential Cost Savings / Benefits
		• Transfer these functions to either private sector or local/other state government agencies for prompt, reliable and efficient service • Potentially reduce the costs associated with providing these services • Reduce in-house staff associated with these functions <u>FTE Savings</u>: • The project team estimated that FDOT would be able to reduce in-house staff currently performing these functions by 40-45 FTE positions: o 20 plus FTE positions performing building maintenance related activities (Central Office and Eight District Offices) o 16-18 FTE positions performing reprographic services o 2-3 FTE positions performing video production services o 1 FTEs per district for various permits (7 FTEs total)
Chapter 6 Recommendation # 7	Promote the use of alternative QA/QC concepts for construction and maintenance projects	FDOT has the highest number of materials and testing staff compared to its peer state agencies. Promoting the use of alternative QA/QC concepts for highway construction and maintenance projects would significantly reduce the requirement for in-house resources. Additionally, implementation of this recommendation would also reduce the need for project oversight – construction engineering inspection. <u>FTE Savings</u>: • Presently, FDOT has 535 FTE positions working in the materials and research section. Additionally, FDOT spends approximately $200 million in CEI related activities. • The project team has assumed that FDOT would be able to reduce the in-house staff associated with materials and testing by minimum of 20 percent through use of alternative QA/QC concepts. Additionally, FDOT would be able to achieve similar savings in CEI related costs. • Implementation of this recommendation would result in saving of 106-110 FTE positions and $40 million worth of reduction in CEI related costs.

Reference	Recommendation	Potential Cost Savings / Benefits
Chapter 6 Recommendation # 8	Automate Human Resources functions	Presently, the human resources function is decentralized at the district level with the Central Office providing overall support and coordination. The recent advances in technology have made it possible to fully automate human resources functions. The private sector firms have successfully transformed HR functions from manual and paper intensive to fully automated function. FTE Savings: • The project team has assumed that FDOT would be able to save between 1 to 2 FTE positions per district and another 8-10 FTE positions by fully automating the HR functions • Implementation of this recommendation could result in saving of 15-24 FTE positions
Chapter 7 Recommendation # 1	Realign and train FDOT staff to support a life-cycle approach to project delivery	Potential benefits of implementing this recommendation are included in the recommendation discussed earlier (Chapter 4 – Recommendation # 1). For additional information, please refer to discussion presented for Chapter 4 – Recommendation # 1.
Chapter 7 Recommendation # 2	Transfer the Office of Motor Carrier Compliance from FDOT to an agency that performs similar business functions.	This recommendation is intended to incorporate the Motor Carrier Compliance Office with another agency for more efficient execution of compliance related responsibilities. FTE Savings: Implementation of this recommendation would result in FDOT transferring 430 FTE positions to another agency.
Chapter 7 Recommendation # 3	Establish baseline in-house staffing levels and skills requirements for FDOT's core functional areas (a Resource Model)	This recommendation is intended to accomplish a proper balance of in-house staffing through evaluation of in-house staffing and skills requirements for FDOT's core functional areas using a Resource Model. Implementation of this recommendation would allow FDOT to clearly identify in-house capabilities for performing core functions and the requirements for outsourcing functions to augment in-house staff capabilities. Additionally, the accountability and responsiveness of in-house staff is likely to further increase – use of the Resource Model concept would allow FDOT to manage in-house staff more efficiently and effectively. FTE Savings: • Based on peer states comparison and benchmark analysis, the project team considers that this recommendation has potential to reduce in-house staffing requirements. However, a detail staffing analysis should be performed to identify the potential cost-benefits of this recommendation.

Reference	Recommendation	Potential Cost Savings / Benefits
Chapter 7 Recommendation # 4	Establish a career and succession planning strategy for managers and leaders at FDOT	This recommendation is intended for FDOT to establish a career and succession planning for key staff categories. Implementation of this recommendation would result in: • Higher staff morale • Career track for key staff categories • Improved ability to attract and retain qualified staff • Ability to successfully incorporate "lessons learned" from private sector
Chapter 7 Recommendation # 5	Revise measures used to assess FDOT's management and operational performance	This recommendation directs FDOT to develop a set of measurements that accurately reflect the outcome and results that are more meaningful and relevant to FDOT and its stakeholders. Traditionally, the outcome based performance measures are know to instill positive changes that potentially could translate into higher efficiency and additional opportunities for improvement. Outcome and result oriented measures would allow FDOT to more effectively and efficiently project resource requirement (both staff and funding) to meet its goals and objectives and positive contribution it provides in promoting and maintaining mobility and safety on the State Highway System.
Chapter 7 Recommendation # 6	Consolidate staff in offices that perform the Department's various QA/QC functions	Responsibilities for QA/QC functions such as performance audits, performance measures, quality reviews, training and special projects (Sterling Process) are divided among several offices within the Central Office. Consolidating these functions under a single Office of Quality Initiatives would allow FDOT to perform various QA/QC functions in cost-effective and efficient manner. FTE Savings: • The project team has assumed that implementation of this recommendation could result in saving of 4-6 FTE positions by consolidating support and administrative staff.
Chapter 7 Recommendation # 7	Consolidate area engineer positions	Area engineers, operating out of the FDOT's Office of the State Highway Engineer, are responsible for providing technical expertise and guidance to District Offices. Presently, for most part, each District has its own designated area engineer for design, maintenance and operation. Consolidating these area engineers positions – one area engineer per district – would allow FDOT to reduce the number

Reference	Recommendation	Potential Cost Savings / Benefits
		of area engineers positions. FTE Savings: • The project team estimated that FDOT would be able to reduce 10 FTE positions through consolidating area engineer positions.
Chapter 7 Recommendation # 8	Consider "corridor management" approach as an alternative to FDOT's current District organization	This recommendation is intended for more of a policy discussion for dividing the responsibilities for delivering the highway improvement projects and performing various highway operations and maintenance activities. Considering that major corridors would be the backbone of Florida's transportation network in the future, the "corridor management" approach should be further evaluated.
Chapter 7 Recommendation # 9	Discontinue inspection of private airports, rail tracks and railroad equipment	Presently, FDOT inspects and license over 260 private airports, inspects 5,000 miles of track, 3,000 turnouts, 14,000 freight cars and 500 locomotives. Very few other state transportation agencies are required to assume these inspection duties. Discontinuing inspection of private airports, rail tracks and railroad equipment would allow FDOT to concentrate on core functions and responsibilities. FTE Savings: • The project team estimated that implementation of this recommendation would allow FDOT to reduce 10 FTE positions.
Chapter 8 Recommendation # 1	Develop full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS	Going forward, ITS program implementation is expected to play a vital role in supporting the mobility and safety on the State Highway System. This recommendation is directing FDOT to develop a full-scale ITS deployment plan that clearly outlines FDOT's strategies for the deployment, operations and maintenance of ITS applications on a statewide basis, describes meaningful and tangible benefits of deploying ITS applications, and identifies opportunities for establishing a public-private partnership for the deployment, operations and maintenance of ITS applications in Florida. A detail cost-benefit analysis has to be a component to identify potential benefits of ITS deployment in Florida in terms of increased mobility, improved safety and expansion and preservation of the transportation network.
Chapter 8 Recommendation # 2	Establish an ITS advisory council to guide deployment of ITS in Florida	Establishing an ITS advisory council would allow FDOT to coordinate ITS design, deployment and operation related

Reference	Recommendation	Potential Cost Savings / Benefits
		activities with key stakeholders.
Chapter 8 Recommendation # 3	Complete the transition of the FDOT information technology function to the State Technology Office	Close co-ordination and co-operation between FDOT and STO is essential for efficient implementation of various information technology and ITS related initiatives.

In summary, recommendations presented in this report collection could result in:

- Between 730 and 775 FTE staff positions savings as a result of efficiency and process related recommendations
- Additionally, significant number of in-house and consultant positions could be reduced through further evaluation of some recommendations, as discussed in the exhibit above. These recommendations collectively could provide long-term economic and resource management value
- 918 FTE staff positions in the OTO transferring to the Turnpike District – upon transfer, essentially all of these staff positions will be outsourced
- Another 200 FTE OTO staff positions would be reduced through outsourcing of toll collection and related activities
- 430 FTE staff positions in the Motor Carrier Division will be transferred to an agency that performs similar business functions

Please note that, except for the OTO positions, potential reduction in the in-house and consultant resources identified above are based on the present level of outsourcing and do not take into consideration any additional FTE reduction due to potential increase in the outsourcing activities. As indicated in this report, the Department plans to increase the current levels of outsourcing in core functions – planning, design, right-of-way, construction engineering inspection, and highway maintenance activities to achieve the goal of reducing in-house staffing resources by approximately 28 percent over the next five years. Approximately 75 percent of the Department's planned reduction in in-house resources are expected to come from further outsourcing of core functions.

8. OTHER STRATEGIC ISSUES

This chapter presents a brief discussion regarding the Intelligent Transportatio System deployment, integration of FDOT's information technology function with the State Technology Office, and the roles and responsibilities of the Florida Transportation Commission.

8.1 INTELLIGENT TRANSPORTATION SYSTEM

Florida is one of the fastest growing states in the nation – Florida's population is expected to increase from approximately 15 million currently to more than 20 million over the next 20 years, and number of visitors are expected to increase from 48.7 million in 1998 to nearly 83 million by year 2020. Economically, Florida has emerged as one of the fastest growing trade markets, experiencing a significant growth in international trade and serving as a major hub in the southeastern United States.

The financial resources currently available to FDOT are not adequate to meet Florida's transportation needs in the 21st century - the current revenue projections suggest that over 60 percent or $29 billion of FIHS improvements needed by 2020 remain unfunded. The current congestion levels on the Interstate and FIHS, projected growth in daily vehicle miles traveled, environmental impacts, and other considerations, combined with FDOT's limited ability to fund planned transportation improvement projects, create a strong need to consider alternatives, such as Intelligent Transportation Systems, to highway construction for expanding system capacity and improving safety.

Intelligent Transportation Systems (ITS) include a variety of technological applications that either individually, or in combination, provide information to support more efficient movement of goods and services. Today, state transportation agencies have successfully deployed ITS technologies for traffic management, traveler information systems, emergency response systems, electronic toll collection, and rail and bus transit operations.

Among the benefits derived through the deployment of ITS include:

- Enhanced public safety
- Reduced congestion
- Improved response during an emergency situation – hurricane, flood, fire
- More efficient allocation of existing highway capacity
- Quick restoration of highway capacity after natural disasters and/or major accidents
- Improved access to travel and transit information
- Reduced air pollution levels and other environmental enhancements
- Improved regional data collection and dissemination for transportation planning
- Cost savings to motor carriers, transit operators, toll authorities, and governmental agencies in terms of time savings

Nationwide, direct benefits from transportation system efficiency gains (as measured by time savings, operating costs, incidents, and fuel efficiency) were expected to reach $252 billion over

a 20-year period. The majority of the direct benefits are attributed equally between accident savings and time savings. Using the proxy of the ratio of 1997 U.S. Annual Vehicle-Miles of Travel (VMT) to Florida's annual VMT of 5.24 percent, direct benefits from transportation system efficiency gains for Florida could reach up to $13 billion over a 20-year period. Capturing potential benefits of ITS is vital for maintaining Florida's economic competitiveness and quality of life.

8.1.1 ITS Deployment in Florida

FDOT has several traffic management ITS applications under operation in Orlando, Miami, Jacksonville, and Daytona Beach that help promote more efficient allocation of highway capacity. However, FDOT's decentralized approach for ITS deployment has resulted in districts/metropolitan regions implementing diverse and incompatible systems. For example, ITS systems in south Florida (Miami/Ft. Lauderdale/West Palm Beach region), central Florida (Orlando region) and north Florida (Jacksonville region) are using different software platforms. Additionally, Florida has two different systems for electronic toll collection - the Orlando-Orange County Expressway Authority and the Turnpike District use two different systems (E-Pass and SunPass™) for electronic toll collection. The project team recognizes that efforts are underway to phase in SunPass™ Electronic Toll Collection on all state operated toll roads by January 2001, and the Orlando-Orange County Expressway Authority is currently upgrading the technology infrastructure for transponder compatibility.

8.1.2 Integration of ITS into MPO Process

The Florida Statewide ITS Strategic Plan calls for the MPOs to integrate ITS activities into the transportation planning process. However, the current funding formulas used for allocating federal and state funds to MPOs do not distinguish between an ITS project and a traditional roadway capacity project. As such, ITS projects have to compete for funds with other traditional roadway projects. Additionally, the current transportation planning process is typically focused around an MPO's jurisdictional boundary; therefore, comprehensive solutions addressing the regional and statewide transportation needs are not always given priority over local needs.

8.1.3 ITS Program Needs

The funding needs for the ITS program in Florida have not been fully defined. The Central Office is in the process of developing a detailed ITS needs analysis. In addition to the ITS work program funding, several Federal programs are available to support deployment of ITS. The federal grants under the Transportation Efficiency Act for the 21st Century (TEA-21) program, are likely to provide additional grant funds to state transportation agencies. Recently, the U.S. Department of Transportation announced $93.9 million in grant funds for 92 ITS related projects (refer to Appendix E for additional information). Florida received approximately $1.2 million for ITS related projects. While ITS operations and management costs are eligible for federal aid, those systems would have to be first funded by the MPOs in their TIPs. System maintenance costs are not eligible for federal aid.

8.1.4 Opportunities for ITS Deployment

Traffic congestion costs the Florida drivers millions of dollars in loss productivity and wasted fuel each year. Congestion on the FIHS and Interstate highways have been gradually increasing over the past several years. With the projected growth in Florida's population and visitors, congestion on the FIHS and Interstate highways could deteriorate even further. As mentioned earlier, financial resources available currently for the operations, improvement and expansion of the Florida's State Transportation System are not adequate to meet the projected funding needs. Additionally, the funding situation is not likely to improve soon as people are unwilling to pay additional taxes. The current situation calls for state transportation agencies to apply alternative/innovative methods, such as use of ITS applications, to meet the transportation needs of today and anticipate the needs of the future.

Many state transportation agencies, including FDOT, have deployed ITS applications for establishing an efficient, integrated, regional, multi-modal transportation system. ITS applications are deployed throughout the nation to provide traffic surveillance, speed and volume data, hazardous driving condition report and up-to-date information to motorists. Examples of various opportunities for ITS deployment in Florida are briefly discussed below:

Maximize Asset Utilization – Interstate I-95 and the Florida Turnpike run parallel to each other for a long stretch of highways between Ft. Pierce and Miami. Through the use of ITS application, FDOT would be able to maximize utilization of these assets by informing motorist about traffic congestion, accidents, hazardous driving conditions, etc. and advising motorists to use alternative routes (e.g., Florida Turnpike). Such use of ITS application could result in higher revenues for the Florida Turnpike and enhanced customer satisfaction.

Ramp Metering and Synchronization of Traffic Signals – Many state transportation agencies have successfully implemented the concept of ramp metering to relieve traffic congestion on freeways/Interstate/major highways. FDOT could work with the major metropolitan regions to implement ramp meters, combined with synchronized traffic signals on roads connecting to the Interstate/Intrastate highways, to control the flow of traffic coming to the highways. Implementation of ramp meters and synchronization of traffic signals could allow the highways to carry optimum traffic volume during the peak hours and thus reduce traffic congestion. Consideration should also be given to installing traffic-actuated warning signs where buildings, curves, and other obstacles severely limit the sight distance available to motorists.

Information Sharing – An integrated transportation operations and communication center could provide real-time traffic information to travelers and transportation officials to enhance operational efficiency and improving traveler safety. For example, FDOT could provide the real-time traffic information on major commuter routes via television, radio, telephone and over the Internet to motorists and information about possible alternative routes. Motorists should be able to access real-time traffic information on routes they commute daily or travel regularly.

The transportation operations and communication center should have the capabilities for:

- Allowing users to "book-mark" routes they travel frequently to check traffic conditions over the Internet

- Allowing users to call a dedicated phone number to get the up-to-date traffic information on routes of their interest

- Sending an e-mail or a voice message to subscribers giving them the real-time traffic information on routes of their interest – interested users would subscribe to this service to receive the real-time traffic information on routes of their interest during the peak hours

- Providing live feed to regional television and radio stations

Incident Management – The automobile industry has made great strides in integrating the Global Positioning System (GPS) and wireless communication systems (e.g., NorthStar™, Never-Lost™) in passenger and commercial vehicles for navigation and emergency management purpose – GPS allows the system operators to pin point vehicle location and the wireless communication system allows the motorist to talk live with the system operator. Today, many automobile manufactures are advertising that such systems on their cars would automatically call the system operator in case of an accident (activation of air-bag triggers the system to automatically call the system operator). Recent trend indicates that these systems would become a standard accessory in most passenger cars within the next several years.

FDOT could link its incident management command and control center with operators of these systems (NorthStar™, Never-Lost™) and FHP's highway emergency response center (#77) to exchange real-time information for efficient and effective incident management. Additionally, when capabilities for two-way information exchange becomes a reality, FDOT could inform motorists equipped with such systems about potential traffic congestion, accidents, or hazardous driving conditions based on motorist's location and direction of travel (through the use of GPS) on demand.

8.1.5 ITS and Public-Private Partnership

Recently, FDOT completed an innovative leasing arrangement of public right-of-way in return for private provision of fiber optic capacity on 2,000 miles of highways. The public-private partnership arrangement could potentially be used for supplementing conventional public funds for ITS deployment.

Exhibit 8-1 presents options for public-private partnerships for deployment of ITS in Florida.

Exhibit 8-1: Options for Public-Private Partnerships

Approach	Method	Revenue/Savings Source	Sponsor	Current Examples	Potential Examples
User Revenues	(User) revenues	User pays fees to FDOT as service provider	FDOT (public service provider)	Traveler info systems Road weather info	Any service that the public will pay for (future traveler

Approach	Method	Revenue/Savings Source	Sponsor	Current Examples	Potential Examples
				system	information or services)
Privatization	Project (User) revenues	User pays fees that are split between public sector (FDOT) and private sector provider	Private service providers	Traveler info systems Road weather info system Traveler assurance systems (mayday)	Any service that the public will pay for (future traveler information of services)
Public-Private Partnership	Franchise fee	Flat franchise fee paid to FDOT for exclusive private provision rights	FDOT (public infrastructure owner)	Traveler information systems	
	Resource-sharing	Private fees paid for exclusive use or private provision of facilities for public use	FDOT (public infrastructure owner)	Florida Fiber Network	Local extensions of fiber network
	Advertising	Private fee paid to FDOT for advertising placement on public facilities	FDOT (public owner of infrastructure or right-of-way)	Traveler info system (phone advert.) Travel radio	Road side call boxes Variable message signs
	Affinity/ Sponsorship	Private fee paid for appearance of sponsor name (logo) in association with facility	Public owner of facilities	Litter control	Road side call boxes Variable message signs
	Cost-sharing	Costs shared between public-private sector	Combined investment (private investment on public R.O.W)	None	Cellular geolocation systems (as per FCC E911 reguations)
Innovative Project Delivery	Outsourcing	Increased efficiency	Public sector contracting out	Operations and maintenance services Operations of traffic operations centers Toll collections	Operations of assets
Fees	Taxes generated by use of ITS (fiber) net	Fiber operator collects from customers	Private fiber franchisee	NA	
	Special fees	Vehicle licenses	Public sector	Use in funding FDOT general program	Special

Source:

8.1.6 ITS Related Challenges in Florida

This section briefly describes ITS related challenges such as, incompatible ITS architecture, ITS funding needs, necessity for close cooperation among inter-jurisdictional agencies and governments, and system operations and maintenance.

Among the ITS related challenges facing FDOT include:

- **Standards for ITS System Architecture -** Florida has gained extensive experience in the planning, deployment, operation and management of ITS systems in major metropolitan regions. However, lack of standards for statewide ITS systems architecture and equipment have resulted in several incompatible ITS systems throughout the state. Conformity with the National ITS architecture and standards would help reduce ITS acquisition, system operations and maintenance, and training related costs.

- **Single ITS Software Platform –** Incompatible ITS software platforms currently in operation in various metropolitan regions make it difficult for FDOT to create a statewide interconnected transportation system for centralized 24-hour operation. Converting existing incompatible ITS software platforms into a statewide ITS system could reduce the costs of operating and maintaining ITS and would allow sharing of information between centers.

- **Inter-jurisdictional Cooperation –** Each region, local area and MPOs have their own unique requirements and criteria with respect to project selection and project planning. However, successful implementation, operation and maintenance of ITS systems requires close cooperation from the FDOT, other state agencies (STO, FHP, etc.), MPOs, expressway authorities, transit agencies, local law enforcement agencies, and local governments.

- **Funding –** FDOT has estimated that the proposed deployment of freeway/expressway management systems in major metropolitan regions would require approximately $400 million in capital expenditures over the next several years.

- **System Operations and Maintenance** – The Florida Statewide ITS Strategic Plan acknowledges that the current funding level for operations and maintenance of ITS is inadequate. To effectively operate the system and provide the public with the intended benefits, operations and maintenance of ITS needs to take into account costs associated with the system operations and management, system maintenance, equipment and software upgrade/replacement, and training.

In accordance with the recommendation made as part of the Statewide Strategic Plan for ITS, FDOT has recently made key organizational and operational changes to support statewide ITS deployment. FDOT has created a State ITS Office in Tallahassee, designating an ITS Manager, and centralizing all ITS functions formerly administered by District traffic operations personnel. The Department is also revising its ITS Strategic Plan to accommodate these

organizational and process changes and build upon ITS technology and systems already installed throughout Florida.

8.2 INFORMATION TECHNOLOGY AND INFRASTRUCTURE

FDOT's Five-Year Work Program indicates that the Department is planning several information technology projects, worth more than $27 million, over the next five years. Examples of planned modifications to existing and development of new information technology systems include:

- TRANS*PORT Construction Management System
- Bridge Management System
- Engineering/CADD System
- Geographic Information System
- Electronic Document Management System
- Intelligent Transportation System Deployment
- Infrastructure Replacement

Additionally, several recommendations presented in this report, as summarized below, would require either major upgrades to existing information technology systems or development/procurement of new information systems.

- Automating contract advertising and letting functions
- Automating human resource functions
- Resource planning system
- Project management system

FDOT should coordinate these information technology initiatives with the State Technology Office to take advantage of potential common infrastructure functions and leverage the State's purchasing power, and facilitate enterprise-wide integration of technology and resources.

8.3 RECOMMENDED STRATEGIES

This section presents our recommended strategies for the ITS deployment and transition of the FDOT information technology function to the State Technology Office.

Recommendation 1: Develop full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS

The state is at critical juncture – it must develop an ITS Deployment Plan that builds upon its existing ITS investments and leverages effective new technology to improve mobility and safety on Florida's highway system. For ITS in Florida to accomplish these objectives, FDOT's Deployment Plan must address the following critical issues:

- *Identify and deploy technology that is truly effective*. FDOT needs to build upon the experience of other states in adopting systems that are truly effective. It must be able to

carefully evaluate available technology and vendors to distinguish "vaporware" from products that provide real value.

- *Harmonize incompatibilities between existing ITS systems*. FDOT has already made substantial investments in ITS over the past 10 years. The Department's initial, decentralized approach to ITS deployment has resulted in at least four different systems that must be integrated with new ITS system components.

- *Fully evaluate regulatory and process changes that maximize motor carrier participation in ITS.* A study by the National Governor's Association asserted that the net benefits associated with ITS are directly proportional to motor carrier participation in these systems. FDOT's Deployment Plan should consider technology and related regulatory and process changes that promote higher levels of motor carrier participation via interstate cooperation/coordination and through monetary and non-monetary incentives to motor carriers.

- *Determine realistic implementation costs and schedules.* Florida has set aside dedicated funding for ITS deployment on selected corridors. Estimated implementation costs and schedules must be reliable for the state to leverage these limited financial resources to completely build out the ITS network it plans.

- *Address long-term systems and operations needs.* FDOT's Deployment Plan must fully consider the annual funding requirements for routine ITS operation and maintenance. It must also address funding requirements for system upgrades.

- *Address service delivery strategies.* Staffing ITS operations centers and field crews with appropriate technical qualifications will be challenging. The Deployment Plan should consider this issue and provide means for ensuring that FDOT maintains the personnel resources required to operate and maintain installed systems.

- *Establish a partnership with the private sector.* A partnership with the private sector is critical to the full deployment of ITS in Florida. FDOT should explore various options for funding statewide ITS deployment, including public-private partnerships.

The project team recommends that FDOT establish a firm time-line for preparing the full-scale ITS deployment plan (e.g., within 6 to 9 months). As deemed appropriate, FDOT should seek consulting and/or technical assistance for preparing the proposed ITS deployment plan. The proposed ITS deployment plan should clearly outline FDOT's strategies for the deployment, operations and maintenance of ITS applications on a statewide basis, describe meaningful and tangible benefits of deploying ITS applications, and it should identify opportunities for establishing a public-private partnership for deployment, operations and maintenance of ITS applications in Florida. A reasonable strategy could plan to begin realizing benefits within 18 to 24 months of completing the initial deployment plan.

Additionally, the project team recommends that FDOT should carefully evaluate projects in the Department's Five-Year Work Program to determine the extent to which planned ITS

investments may allow the state to reduce the scope, and hence the cost of planned transportation improvements.

Recommendation 2: Establish an ITS advisory council to guide deployment of ITS in Florida

The successful planning, development and implementation of ITS applications require close cooperation among key public agencies, private organizations, and user communities. Nationally, and within Florida, there has been lot of discussion about the absolute need for complying with the National Architecture for ITS development and implementation, inter-operability of various ITS applications, and ability of various ITS command and control centers to readily share information among themselves and user communities. In short, decisions about ITS development and deployment cannot and should not be made in isolation.

As mentioned earlier, FDOT has made key organizational and operational changes to support statewide ITS deployment – FDOT recently created a State ITS Office in Tallahassee and centralized all ITS functions formerly administered by District traffic operations personnel. The project team believes that successful development and deployment of ITS applications in Florida would require FDOT to work closely with the State Technology Office, private sector organizations engaged in ITS development and deployment, and the user communities.

The project team recommends that FDOT establish an ITS advisory council to guide development and deployment of ITS applications in Florida. The proposed ITS advisory council should consists of members from the State ITS Office, Florida Transportation Commission, State Technology Office, ITS industry group, American Automobile Association (AAA), commercial transportation group, and other user communities.

The ITS advisory council should be responsible for:

- Establishing a vision for ITS deployment in Florida
- Setting policies and procedures for ITS development and deployment
- Guiding the FDOT efforts for ITS deployment
- Working closely with MPOs and other government agencies for ITS deployment
- Supporting the FDOT in securing necessary funding for ITS deployment
- Seeking opportunities for public-private partnership for ITS deployment and operations

Recommendation 3: Complete the transition of the FDOT information technology function to the State Technology Office

Until now, the Department and other state agencies have been responsible for building and managing independent applications, data, and assets, as well as staffing and budgeting resources. This process has created silos of information technology assets and expertise, costing Florida time and money. The State Technology Office (STO) will align technology efforts to meet Florida's needs by implementing an enterprise model. With an integrated digital government, citizen access is simplified, customer service improved, and technology resources are more effective.

Technological advances are moving the traditional technology tools onto a path of "convergence." Communications networks transport voice, video, and data on the same media, at virtually the same time. Applications are moving from desktop and server to the Internet. The Internet and E-commerce have made it possible for transactions to occur 24 hours a day, seven days a week. These factors allow Florida government to efficiently deliver public services and improve the relationship between government and its citizens.

The purpose of the STO is to consolidate common core infrastructure functions and facilitate enterprise-wide integration of technology and resources. The STO will leverage economies of scale and establish an interoperable environment that will reduce the cost and effort of integrating and accessing information. For the Department, the benefits will include:

- A telecommunications and information infrastructure and support for leveraging ITS initiatives
- Align the Department's information and communication information infrastructure with the State Enterprise architecture
- Leverage the State's purchasing power
- Shared Resource Center which houses and supports hardware and equipment owned by various government entities and offers complete technological solutions, maintenance, backup, disaster recovery, network access points, information processing, Internet services, electronic commerce services, and legacy system operations and maintenance
- Applications development methods, standards, and support
- Integration of voice, video, and data communications to promote effective use of video teleconferencing, mobile phones, pagers, and personal telecommunications services
- Mobile data access through Cellular Digital Packet Data (CDPD) and Personal Telecommunications Services (PTS)
- Radio communications integrated with emergency operation and public safety functions
- Enhanced communication services to rural and urban areas
- County and municipal wireless communications, such as emergency medical services, law enforcement, and rescue services with planning, funding, licensing, frequency coordination, engineering services, and quality assurance assistance
- Quality service, customer support, and security standards

8.4 FLORIDA TRANSPORTATION COMMISSION – A SELF ANALYSIS

The organizational and operational analysis of the FDOT, commissioned by the Florida Transportation Commission, required interviews with a cross-section of Florida's transportation stakeholders. An unexpected, but relevant, topic during those interviews was the role of the Commission in the organizational and operational context of FDOT. This "Self Analysis" is the result of efforts by the Commission, in parallel to the organizational and operational analysis, to define their role going forward.

This section discusses the Commission's history, accomplishments, and work products, and presents the pros and cons of three options for the Commission's role in the future.

8.4.1 Introduction to the Florida Transportation Commission

Created in 1987. The Florida Transportation Commission (FTC) was created by the 1987 Legislature to serve as a citizen's oversight board for the Florida Department of Transportation (Department). The Commission is independent of the Department.

Current Mission Statement:

> *" The mission of the Florida Transportation Commission is to provide leadership in meeting Florida's transportation needs through policy guidance on issues of statewide importance and maintaining public accountability for the Department of Transportation."*

Nine Members. Composed of nine Commissioners appointed by the Governor and confirmed by the Florida Senate for four-year terms, the Commission meets 8-9 times per year. While the usual meeting location is Tallahassee, the Commission meets two or three times a year in the Districts to receive local input.

Geographic Representation. The law requires that membership "equitably represent all geographic areas." Historical precedent is one commissioner from each FDOT district and two "at large" commissioners; one with rail and one with ports expertise.

Maintain a state-wide perspective. The Commissioners must represent transportation needs of the state as a whole and may not subordinate state needs to those of any particular area. The Commission is prohibited from involvement in day-to-day operations of the Department (e.g., consultant or contractor selection, specific projects, personnel matters). Periodically, the Auditor General is directed to review commission compliance with the law.

8.4.2 Primary Functions

The Commission's four primary functions are to:

- Review major transportation policy initiatives or revisions submitted by the department pursuant to law.

- Recommend major transportation policy to the Governor and Legislature (Commission has recommended policies related to public transit, funding, road jurisdiction, truck weights and penalties, etc.).

- Serve as an oversight body for the FDOT (Commission assesses performance, monitors financial status, and reviews work program, budget requests and long-range plan).

- Serve as nominating commission in the selection of the Secretary of Transportation (Governor appoints secretary from among three candidates nominated by the Commission).

8.4.3 Major Accomplishments

- In 1988, the Commission developed a visionary financing plan for Florida's Turnpike: "To use the bonding capacity of the Turnpike to finance new Florida Intrastate Highway System projects which, in time through tolls collected, would help finance future transportation projects on a statewide basis."

  - ✓ As a result of this visionary financing plan, during the 1990s, the Turnpike System increased in length by 129 miles. This represents a $2.1 billion investment in Florida Intrastate Highway System projects with another $1.7 billion of improvements to the Turnpike Mainline.

- In 1990, the Commission began the process of developing transportation performance and productivity measures for the Department with the purpose of ensuring public accountability and that the Department keeps its commitment to build the projects it committed to build. The most notable area where this process has worked is with time and cost overruns to construction contracts.

  - ✓ In FY 93/94, the Commission first identified a rising trend in time and cost adjustments to construction contracts.

  - ✓ When the trend continued in FY 94/95, the Commission expressed the need for the Department to address the rising trend. Efforts were initiated which have gradually turned the upward trend around.

  - ✓ These performance reviews have contributed to the turn around of the Florida Department of Transportation. The Department is once again on solid financial ground and is focused on meeting or exceeding current performance and productivity measures.

- In 1996, the Commission documented the relationship between transportation infrastructure and Florida's economic prosperity in a report entitled *Transportation: An Investment in Florida's Future*. The report included case studies of how Florida businesses depend on transportation and have benefited from efficient transportation connections.

  - ✓ Following the release of the report the Commission successfully urged the Florida Chamber of Commerce Foundation to take the next step and conduct a study to

recommend how transportation planning and spending can be better focused to support and grow Florida's major economic sectors. The Chamber Foundation's *Transportation Cornerstone* report was the main initiative for the transportation revenue increases by the 2000 Legislature.

- In February 1996, the Commission requested the Department to conduct a thorough review of the Turnpike Program's future after the year 2000. The Turnpike Office issued its report in January of 1997 with a program based on building on the success of the Turnpike and continuing to leverage its resources to meet growing transportation needs. The report presented 22 strategies and an enhanced program for the 2000 through 2020 period. The report also identified 26 potential Turnpike funded projects statewide.

- Prior to the creation of the Commission there were 10 secretaries in a 20 year period. Since 1989 there have been two secretaries - Ben Watts 1989 - 1997 and Tom Barry 1997 – present. The commission has been instrumental in ensuring a return to stability at the Florida Department of Transportation.

8.4.4 Work Product and Reports

The Commission has issued the following annual and quarterly reports:

- **Performance and Production Review of the Florida Department of Transportation.** Quarterly report that evaluates the Department's achievement in meeting a number of performance measures. The 4th quarter report serves as the annual performance evaluation and is submitted to the Governor and Legislature.

- **In-Depth Evaluation of the Department of Transportation Tentative Work Program.** Annual review of the Department's proposed Five Year Work Program. This report is also submitted to the Governor and Legislature.

Additionally, the Commission has issued the following focus-specific reports.

- **Independent Review of Florida's High Speed Rail Ridership Forecasts,** August, 1998 (prepared by Wilbur Smith Associates). An assessment of the reasonableness, soundness, and validity of the processes, methodologies and assumptions used in arriving at the Department's high speed rail ridership estimates.

- **Transportation: An Investment in Florida's Future,** June, 1996. Joint effort with Floridians for Better Transportation that documents the strong relationship between transportation investment and economic strength and quantifies the economic return on that investment.

- **Functional Classification of Roads,** December, 1994 (statutory mandate). Study undertaken to develop, apply and identify fiscal impacts of a new system for determining road ownership based on road function.

- **Analysis of Department Right of Way Acquisition Activities on the Central Connector Project,** September, 1993 (requested by Governor). Conclusions and recommendations regarding the Department's right of way acquisition activities.

- **Truck Weights and Penalties in Florida,** July, 1993 (statutory mandate). Reviews Florida's regulation of truck weights and associated penalties and makes findings and recommendations to the Legislature.

- **Transportation Performance and Productivity Measures,** January, 1992 (statutory mandate). Documentation and explanation of the transportation performance measures that were developed by the Commission's 13-member Working Group to provide public accountability for the Department of Transportation.

- **A Study of Coordination of Local and Regional Public Bus Transit and Fixed Guideway Transportation Systems in Florida,** April, 1991 (statutory mandate). Study of the need to coordinate local and regional bus transit and fixed guideway transportation systems, including an analysis of current coordination; a determination of the need for coordination among levels of government; a review of coordination methods and their applicability to Florida; and recommendations.

- **District Equity,** March, 1991 (statutory mandate). In-depth evaluation of the allocation of funds to the Department districts and to the various counties within each district.

- **Review of Metropolitan Planning Organizations,** February, 1991 (statutory mandate). Review of the responsibilities imposed on metropolitan planning organizations by state or federal law, rule, or regulations and an assessment of the adequacy of funding in light of mandated responsibilities.

- **Review of Employee Positions,** December, 1990 (statutory mandate). Review of employee positions in the Department of Transportation with recommendations to the Legislature as to those positions that should be exempt from the Career Service System.

- **Evaluation of the Florida Department of Transportation's Implementation of the KPMG Peat Marwick Action Plan,** May, 1990. An evaluation of the Department's progress in implementing recommendations made by KPMG Peat Marwick to address financial management and program management problems including an evaluation of the Department's use of information technology resources.

- **Transportation Funding Initiative,** January, 1990 (Commission initiative). Analysis presented to the President of the Florida Senate outlining Commission recommendations on a program for additional transportation funding.

- **Report on Results of Applying Certain Agreed-Upon Procedures in Accordance with Proviso Language Contained in Section 2.5 of the 89/90 General Appropriations Act,** October, 1989 (statutory mandate). Analysis of the impact of legislative proviso language regarding bonds for advanced acquisition of transportation right of way, including additional

revenue requirements and resources and estimates of the cost effectiveness of utilizing bond financing for advanced acquisition.

- **Functional Classification of Roads in Florida,** October, 1989 (statutory mandate). Study to determine the fiscal impact of transferring to the counties those urban minor arterial roads currently on the State system, recommend time frames for transfer and recommend criteria for determining if a road serves a regional or statewide function.

- **Public Transit in Florida,** February, 1989 (statutory mandate). An assessment of public transit needs, institutional relationships, financing strategies and the effect of urban density on the feasibility of public transit.

- **Funding Alternatives** March, 1988 (requested by Governor). Analysis by the Commission addressing the State's transportation funding needs. The Commission proposed three funding initiatives: an increase in tolls to support a bonding program for Turnpike expansion; a Constitutional Amendment allowing debt financing of the State Transportation Trust Fund for infrastructure needs; and an increase in transportation user-type fees. All three proposed initiatives were subsequently approved by the Legislature.

8.4.5 Our Future

Continuing the charge for accountability. The Commission has had a major impact on the financial and operational turn around of the Florida Department of Transportation. Leading the charge for public accountability, the Commission has, through it's Performance and Production review process delivered on a mandate for better accountability of the Florida Department of Transportation. The Commission has demonstrated thought leadership and provided the impetus to change financial, operational, and policy decisions, which have had a major impact on the transportation system in Florida.

Reviewing our role and value. Currently, the Commission is conducting a Review of the Organizational and Operational Effectiveness of the Florida Department of Transportation. During the review, it has become clear that even though the Commission has been an extremely powerful change agent, serving the public, Legislature, the Governor, the Florida Department of Transportation, the role of the Commission is not clearly understood by their constituents and stakeholders. Typical questions, even within the commission, have included:

- What is the role of the Commission?
- Are they a "watchdog" ?
- Why does The Department of Transportation need a commission when other large agencies and departments do not?
- Does the Commission have a future role or should they prepare for the sunset process?

The nature of these questions from stakeholders (including the commissioners themselves), imply that the Commission *is* an element of the formal Review of the Organizational and Operational Effectiveness of the Florida Department of Transportation being conducted by

KPMG Consulting. The future of the transportation system in Florida requires the Department to successfully go through an organizational and operational transformation process.

Supporting the transportation transformation. The transformation process will include integrating the Department into the Enterprise Vision for Florida government and changing fundamental operational and organizational policies. The department must work smarter, faster, cheaper and more effectively while maintaining quality and being responsive to transportation needs of Florida. This will require a greater reliance on privatization of operations, innovative planning and financing and focus on communications and policy initiatives. In addition, the Department must shift focus from process to product and be prepared with alternative contracting, project management, and personnel management methodologies which will enable it to keep pace with transportation needs.

8.4.6 Options to align and add value

This review of the Department provides an ideal opportunity for the Commission to analyze whether it should continue its current oversight role, redefine it's role to align with the Department transformation, or conclude that it has served its useful life.

Each of those options is discussed below.

Option 1 – Stay the course

The FTC would continue to serve as a citizen's oversight board for the Florida Department of Transportation. The Commission would remain unchanged with respect to mission, organization, focus areas, or funding mechanisms.

Advantages:

- The Commission has had an effective role in the improvement of the financial and operational effectiveness of the Department
- The Commission is in a position to get out in front of sensitive transportation policy issues and take the "heat" for the department, the legislature, and the governor
- The Commission can continue to refine their role within statute to ensure public accountability of the FDOT
- The Commission has provided continuity and communication, which appears to have stabilized the transportation environment. Through changing agendas, they provide stability and focus
- No legislative action required

Disadvantages:

- A cost benefit analysis should be performed to determine if in the upcoming budget years, the state is receiving an adequate return on investment for the benefit the Commission provides

- The Commission, through its current charter has a strained relationship with the FDOT. While this strain is healthy for a "watchdog" type relationship, the FDOT may need a transformation partner rather than a "watchdog"

Option 2 – Modify the Commission Role

The current Commission structure would be modified to better support the transportation needs of the state. The Commission would realign its focus in the following areas:

- Establishing and maintaining the state vision for the transportation system

- Support the process for the creation of transportation policy, including legislative and public relations requirements. This includes:

    - Creation, communication, and coordination of legislative issues and agenda

    - Bi-directional communication with the public and stakeholders on transportation plans, decisions, issues, or initiatives

    - Responsibility for media relations as it relates to the communication and promotion of transportation issues and positions

- Take an active role in voicing regional issues and concerns including but not limited to economic/growth management and emergency management concerns. This would include the assignment of responsibility for constituency management to specific commissioners

- Provide public accountability with a focus on performance and productivity reporting – the focus would shift from *output* related measures to *outcome* related measures, including cost benefit analysis

- Serve as a catalyst for change within the FDOT, facilitating the transformation of the agency into the Model DOT for the 21st century – monitoring and tracking progress against transformation goals

Advantages:

- Provide focus and follow up with regard to the transformation of the FDOT – ensure that change occurs

- Citizen accountability for investment in the FDOT

- Increase effectiveness of transportation system communications to the pubic, private sector, legislature, and governors office
- Isolate FDOT from the public and legislature during unusually sensitive policy deliberations – saving time and money while increasing the efficiency of the Department
- Flexibility to sunset the Commission at a later date, after the Department has gone through its transformation
- Private sector creativity around solving transportation system issues – avoiding DOT cultural bias
- Political support for change within the system
- Ensure stability and focus which will span administrations

Disadvantages:

- Requires legislative change – intent must be clarified to ensure a working relationship between the FDOT and the Commission that will produce better transportation outcomes
- Current staff not structured to support a new Commission structure as described above
- Will require greater coordination with growth management initiatives
- A greater commitment is required of Commission members, particularly during the legislative and planning cycles

Option 3 – Sunset the Commission

The FTC would go through the sunset process. The legislature would provide a date for sunset within the statutory change necessary to disband the Commission . A mechanism for ensuring that the original legislative intent had been satisfied or an alternative mechanism for providing public accountability would be specified within the statutory change required to sunset the Commission .

Advantages:

- More operational flexibility for the Governor and FDOT – no “watchdog”

Disadvantages:

- No Legislative liaison or input
- Elimination of the private sector contribution which has provided for accountability and stability of the transportation system
- Loss of private sector representation ensured through access to the Commission

- Loss of private sector financial and transportation visioning
- Reliance on future governors and legislatures to focus on FDOT – today the Commission provides focus, allowing the governor and legislature to focus on other priorities
- Elimination of another voice and advocate for transportation in Florida
- Statutory change by the legislature is required

Determining the need for change. Ultimately, it is up to the governor and the legislature to determine if a change in the structure and role of the Transportation Commission is in the best interest of the state. Having served its initial purpose, the Commission now looks toward the future to determine how it might best impact the state transportation system. With the support of the governor and the legislature, the Commission can redefine their organizational structure, roles, and responsibilities, in parallel to and coordination with the organizational and operational transformation within the Department and within the state as an enterprise.

Being a change agent for measurable outcomes. Several of the current commissioners are relatively new to the Commission and are prepared to adopt the role of change agent. While the Commission has been effective in its role, there is a need to provide vision along with oversight. There is a need to focus not only on the accountability associated with operational effectiveness but with accountability for the right outcome measures.

Shedding the "business as usual" image. Implementing the enterprise view of government within the FDOT will require shedding cultural bias, which has built up over decades. The Commission , if empowered, can ensure that cultural bias does not prevent change. The Commission staff has roots in the FDOT culture - they too must change. The staff must become the public voice of the Commission and be prepared to research, analyze, and develop visionary position papers for consideration by the Commission . The staff must take an active role in tracking outcome measures with a forward looking view of transportation policy issues that would include tracking implementation of the recommendations adopted from this report.

Improving synergy. While a separation of power between the Commission and the FDOT is essential, a restructured Commission would improve synergy between the two organizations. The combination of the rapid growth of the state and the projected FDOT revenue shortfalls suggest that the state would benefit from the Commission's private sector creativity and the synergy that it can create with the FDOT. Upon successful completion of the FDOT Enterprise transformation process, the role of the Commission can be revisited.

9. NEXT STEPS

In this section, KPMG outlines a plan for implementing the recommendations presented in Chapters 3 through 8 of this report. Specific implementation actions for carrying out each recommendation are discussed within the context of six general categories:

- Legislative Changes – Drafting new legislation or preparing proposed revisions to existing statutes and codes, as necessary to implement recommended process improvements or organizational changes
- Operation Improvement Initiatives – Implementing business process reengineering initiatives and other changes in operating procedures or policy, as recommended to reduce costs and time and improve quality
- Technology Improvements – Identifying and implementing strategies for improving operations through the application of automation and other technology improvements
- Organizational Changes – Implementing changes in the Department's organizational structure and staffing to accommodate increased privatization of service delivery functions, business process changes, technology improvements and other related recommendations.
- Revenue Impacts – Developing and implementing strategies for enhancing funding available for transportation operations and capital improvements
- Other Improvement Strategies – Implementing other changes or improvements in areas not specifically addressed in other categories

For each recommended action cited, KPMG defines a priority ranking and presents a proposed implementation completion date. The priority ranking indicates the relative urgency in implementing a particular implementation action. A ranking of "1" denotes an action of highest priority – a critical task to be undertaken immediately and completed within the next 3-12 months (depending upon implementation complexity). A ranking of "2" refers to a high priority action that may be deferred for up to six months, but should be substantially completed within the next 12 months. A ranking of "3" is assigned to tasks that may be deferred for up to six months and substantially completed within the next 18 months.

Each section also contains a discussion of other implementation issues, including instances where it is critical to collaborate with other government agencies, or where it may be advantageous for the Department to acquire the services of appropriately qualified consultants to provide special expertise or staffing assistance in

implementing recommended actions within proposed time frame.

The value of the recommendations presented in this report will not be fully realized if approved improvement strategies are not fully implemented by FDOT. To maximize the value of the investment made by the state of Florida in this study, KPMG recommends that the FTC conduct a follow-up review in January 2002, to assess the Department's progress in implementing approved recommendations.

9.1 LEGISLATIVE CHANGES

Legislative changes presented in this section include proposed revisions to existing statutes and codes, as required to facilitate recommended process changes and other implementation strategies. Following its own customary procedures for advancing the Department's legislative priorities, FDOT should prepare draft revisions to appropriate sections of Florida Statutes or Administrative Code and present them for evaluation and action by the Florida Legislature.

LEGISLATIVE CHANGES					
CH	**Recommendation**	**Actions**	**Priority**	Implementation Completion Date	Resources
4	2 – Consider legislative changes and additional funding assistance to encourage MPO's to collaborate on regional projects	*Revise Section 339.175, F.S. to allow for more than 5-19 apportioned voting members in an MPO comprised of two or more smaller existing MPO's. Coordinate proposed legislative changes with MPOAC.*	1	May 2001	FDOT with input from MPOAC
		Revise Section 339.175, F.S. to allow MPO's to designate voting representatives from non-elected stakeholder groups and other similar constituencies. Coordinate proposed legislative changes with MPOAC.	1	May 2001	FDOT with input from MPOAC
		Investigate legislative options to bypass the MPO planning process in cases impacting public safety. Enjoin FHWA in dialogue to evaluate and discuss the impact of proposed changes with respect to current federal regulation.	1	May 2001	FDOT with input from MPOAC

LEGISLATIVE CHANGES					
CH	**Recommendation**	**Actions**	**Priority**	Implementation Completion Date	Resources
		Work with Governor's Office to develop proactive strategy for encouraging newly designated urban areas to join existing MPO's.	1	May 2001	FDOT and Office of the Governor
6	1 – Expand the use of alternative/innovative contracting methods for construction contracts	*Revise Section 337.025, F.S. to allow FDOT to increase the current annual maximum limit for innovative highway projects to $250 million.*	2	September 2001	FDOT
	4 – Change Florida Statutes for right-of-way acquisition to reduce cost and time	*Draft revisions to Section 337.11(3)(c), F.S., to allow FDOT to purchase title insurance for properties acquired, in lieu of provision that titles be held vested by the state prior to construction contract bidding.*	2	September 2001	FDOT
		Draft revisions to Section 73.015(3), F.S., requiring property owners to enter into mandatory pre-suit mediation with FDOT in condemnation cases.	2	September 2001	FDOT
		Work with Florida Department of Business and Professional Regulation to evaluate/develop revisions to Chapter 475, F.S. to permit real estate brokers and appraisers to attain Florida licensure status via reciprocity with selected neighboring states.	2	September 2001	FDOT
7	9 – Discontinue inspection of private airports, rail tracks and railroad equipment	*Draft revisions to Section 14-60, F.A.C. and applicable sections of Chapter 330, F.S. to require private airport owners to certify to FDOT that their respective facilities meet all relevant safety and operations standards.*	2	September 2001	FDOT
		Draft revisions to Section 351.36, F.S. to change requirement that FDOT inspect private railroad facilities. FDOT to meet with the Federal Rail Administration (FRA) to discuss proposed changes and revise inspection agreement	2	September 2001	FDOT with FRA

9.2 OPERATIONS IMPROVEMENT INITIATIVES

Operations improvement initiatives include proposed changes in business processes and procedures that will result in reduced cost of service, shortened cycle times, and enhanced quality.

In most cases, operations improvement actions are to be led by FDOT, with input from other agencies as required.

In Chapter 4, Recommendations 1 and 4, FDOT should retain the services of an appropriately qualified consultant to facilitate the re-engineering study and develop recommended process improvements and identify related technology investments and organizational changes.

OPERATIONS IMPROVEMENT INITITIATIVES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
4	1 – Re-engineer FDOT's program and project management processes, systems and organizational structure	*Conduct business process improvement study to define strategy for re-engineering FDOT's program and project management processes. Integrate process changes with related recommended technology improvements and changes in organizational structure.*	1	September 2001	Consultant-led facilitation of FDOT process review team
	3 – Streamline the process for certifying projects as Type 2 Categorical Exclusions (CE's)	*Use FDOT's ongoing "Efficient Transportation Decision Making Process" (a.k.a., "Environmental Streamlining") initiative to develop improvements in the process for certifying projects classified as Type 2 CE"s. Coordinate reengineering efforts with FHWA and other applicable federal, state and local agencies.*	1	July 2001	FDOT with FHWA and input from other agencies
	4 – Accelerate the process for awarding professional service contracts	*Conduct business process improvement study to re-engineer FDOT's consultant selection process. Integrate process changes with related recommended technology improvements and changes in organizational structure.*	1	July 2001	Consultant-led facilitation of FDOT process review team
	6 – Simplify design and plan preparation requirements for 100 percent state-funded projects	*Develop new design and plan preparation standards for 100-percent state-funded projects. Document new requirements and develop plan for communicating to FDOT staff and consultants. Draft and distribute policy document detailing how and when new standards are to be used.*	2	September 2001	FDOT

OPERATIONS IMPROVEMENT INITITIATIVES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
	7 – Improve FDOT's utility location and relocation capabilities	*Develop and implement plan for carrying out recommended improvement strategies:* ■ *Establish goals for expanding the use of value engineering and partnering* ■ *Reimburse utility companies for selected costs associated with utility relocation* ■ *Develop and communicate policy requiring utility companies to provide FDOT as-built plans* ■ *Modify and expand FDOT's use of SUE consultants as specified*	3	December 2001	FDOT
6	1 – Expand the use of alternative/innovative contracting methods for construction contracts	*Develop and implement plan for carrying out recommended improvement strategies:* ■ *Develop standardized guidelines/formulae for determining incentives for various alternative contracting methods* ■ *Develop specific criteria for selecting candidate projects for alternative contracting methods* ■ *Ensure that standards, policies and procedures are consistently applied statewide*	2	September 2001	FDOT
	2 – Expand the use of Asset Management-based contracts for highway maintenance	*Develop and implement plan for executing Asset Management-based maintenance contracts on selected FIHS routes.*	1	July 2001	FDOT

OPERATIONS IMPROVEMENT INITITIATIVES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
	3 – Group professional services contracts to establish enhanced regional coverage	*Develop policies/procedures to guide FDOT staff in combining professional services for multiple projects and/or project phases under a single contract. Specific issues to consider:* ■ *Combine work for multiple projects along a selected corridor* ■ *Combine work for all or several phases of a single project (e.g., preliminary engineering, R/W, CEI, etc.)* ■ *Accelerate initiative to assign specifications responsibility to consultants preparing design plans* ■ *Include preliminary right-of-way activities in consultant design contracts*	1	June 2001	FDOT
	4 – Change Florida Statutes for right-of-way acquisition to reduce cost and time	*Develop policies/procedures outlining a simpler right-of-way acquisition process for non-federal projects.*	2	September 2001	FDOT
7	5 – Revise measures to used to assess FDOT's management and operational performance, adding focus and emphasis on outcomes	*Review and revise performance measures to determine the extent to which FDOT is efficiently and effectively providing services to its stakeholders. Develop plan for periodic monitoring and sharing of performance measure results.*	1	June 2001	FDOT with Consultant assistance
	9 – Discontinue inspection of private airports, rail tracks and railroad equipment	*Develop and carry out implementation plan (outlining training, communication and phased transition schedule requirements) for transferring inspection requirement from FDOT to airport owners.* *Develop and carry out implementation plan for changing FDOT and FRA rail system inspection requirements*	3 3	October 2001 October 2001	FDOT FDOT with FRA

9.3 TECHNOLOGY IMPROVEMENTS

Specific opportunities for improving FDOT technological capabilities are cited directly in the report or may result from recommendations identified through business process re-engineering initiatives. In most cases, implementation of proposed technology initiatives require close coordination or input from other state agencies – often STO and DMS. In other instances, it is critical to retain consultants with appropriate skills and expertise required to implement technology improvements within the designated time frame.

TECHNOLOGY IMPROVEMENTS					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
4	1 – Re-engineer FDOT's program and project management processes, systems and organizational structure	*Identify and implement technology improvement strategies consistent with process improvements and organizational changes proposed in business process reengineering study.*	1	September 2001	Consultant-led facilitation of FDOT process review team
	5 – Automate and centralize contract advertising and letting functions for construction and maintenance contracts	*Evaluate InfoTech's "Bid Express" service as means to quickly automate and streamline the contract bidding process for the Department and its contractors.*	1	June 2001	FDOT with Info Tech
	7 – Improve FDOT's utility location and relocation capabilities	*Provide FDOT's State Utility Office with CADD workstations needed to properly record as-built plans provided by utility companies.*	3	December 2001	FDOT
	8 – Participate in state enterprise pilot initiatives	*Identify opportunities for improving operations through e-procurement and on-line bidding. Develop plan for implementing recommended strategies through DMS and STO pilot projects.*	1	April 2001	FDOT working with DMS and STO
6	8 – Automate Human Resources functions	*Evaluate alternatives, costs and benefits associated with deploying an automated human resource services system. Consider compatibility with proposed statewide ERP solutions.*	3	January 2002	FDOT working with DMS
7	5 – Revise measures used to assess FDOT's management and operational performance, adding focus and emphasis on outcomes	*Develop and implement a system for tracking and reporting the Department's progress in meeting outcomes defined in performance measures*	1	August 2001	FDOT with Consultant assistance

TECHNOLOGY IMPROVEMENTS					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
8	1 – Develop full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS	*Develop statewide ITS Deployment Plan.*	1	April 2001	FDOT working with Consultants, FTC and STO
	3 – Complete the transition of the FDOT information technology function to the State Technology Office	*Complete transition of FDOT's IT function to STO*	1	April 2001	FDOT working with STO

9.4 ORGANIZATIONAL CHANGES

Organizational changes may include a reduction in the number of full-time authorized positions and the realignment of FDOT's organizational structure due to re-engineering recommendations and other operations improvements, technology initiatives and increased privatization of the selected business functions.

Organizational changes may also include initiatives to strengthen management performance through the use of performance measures and strategic career and succession planning. FDOT can directly implement many of the implementation actions cited. However, the Department should retain the services of an appropriately qualified management consultant to assist the Department in carrying out Recommendation 3 and 4 of Chapter 7. Because baseline staffing levels may impact other organizational changes, FDOT may also want to extend the scope of services for this consultant to include assistance in implementing other related organizational improvement recommendations as well.

ORGANIZATIONAL CHANGES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
4	5 – Automate and centralize contract advertising and letting functions for all construction contracts	*Develop plan for eliminating District contract administration staff positions and consolidating advertising and letting functions in the State Contract Administration Office in Tallahassee.*	1	June 2001	FDOT
	7 – Improve FDOT's utility location and relocation capabilities	*Create and fill two full-time technician positions in FDOT's State Utilities Office, as needed to properly file as-built plans provided by utility companies.*	3	December 2001	FDOT
6	2 – Expand the use of Asset Management contracts for highway maintenance	*Evaluate the impact of outsourcing highway maintenance work via Asset Management contracts on FDOT's full-time staff. Develop strategy for reducing staff as FDOT's use of Asset Management contracts increases (coordinate with analysis in Recommendation # 3, Chapter 7).*	2	August 2001	FDOT
	4 – Change Florida statutes for right-of-way acquisition to reduce cost and time	*Evaluate opportunities for outsourcing or privatizing selected right-of-way processes, such as property condemnation casework. Reduce the number of full-time FDOT attorney positions as outsourcing workload expands (coordinate with analysis in Recommendation # 3, Chapter 7).*	2	August 2001	FDOT and Florida Attorney General

ORGANIZATIONAL CHANGES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
	5 – Transfer the Office of Toll Operations (OTO) to the Turnpike District and outsource toll collection functions to private vendors	*Develop and implement strategy for transferring OTO to the Turnpike District. Consider outsourcing options and related reduction in FDOT full-time staff. Implement strategy within 6 months from approval by FDOT Secretary.*	1	May 2001	FDOT
	6 – Outsource and/or transfer selected support services and other non-core functions	*Develop and implement plan for transferring support services from FDOT to private service providers*	2	September 2001	FDOT with input from DMS
	7 – Promote the use of alternative QA/QC concepts for construction and maintenance projects	*Develop and begin implementing plan for expanding use of alternative QA/QC methods. Consider related reduction in full-time staff and plan for transition of services from FDOT to contractors and suppliers*	2	September 2001	FDOT
	8 – Automate Human Resources functions	*Consider staffing impacts associated with proposed automation of Human Resources functions. Develop plan for reorganization or reduction of HR-support staff, pending implementation of proposed automation*	2	September 2001	FDOT with input from DMS (on ERP options)
7	1 – Realign and train FDOT staff to support a life-cycle approach to project delivery	*Develop and begin implementing plan for reorganizing project development staff to support life-cycle approach to project delivery. Plan should detail strategy for providing training in the effective use of project management processes and technology. Coordinate with analysis in Recommendation # 3, Chapter 7.*	1	September 2001	FDOT with Consultant assistance
	2 – Transfer the Motor Carrier Compliance Office from FDOT to an organization that performs similar core functions – or – investigate alternatives to improve MCCO operation within the Department	*Meet with FDHSMV and Governor's Office to determine feasibility and schedule for transferring the Office of Motor Carrier Compliance and all related responsibilities from FDOT to FDHSMV.* *Identify strategies for improving MCCO operations within the Department, including outsourcing, privatizing, and cooperative agreements with local governments and law enforcement agencies*	2	September 2001	FDOT and FDHSMV with input from Office of the Governor

ORGANIZATIONAL CHANGES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
	3 – Establish baseline in-house staffing levels and skills requirements for FDOT's core functional areas (a Resource Model)	*Conduct comprehensive analysis of FDOT's organizational structure, staffing levels and skills with respect to current and future workload requirements. Develop proposed staffing plan and organization structure that supports future workload needs and anticipated level of outsourcing.*	1	July 2001	Consultant-led facilitation with FDOT Steering Committee
	4 – Establish a career and succession planning strategy for managers and leaders at FDOT	*Develop a plan outlining a recommended career and succession planning strategy for FDOT managers and leaders. Communicate and plan and begin implementation with current staff.*	1	August 2001	Consultant-led facilitation with FDOT Steering Committee
7	6 – Consolidate staff in offices that perform the Department's various QA/QC functions	*Develop and begin implementation of plan for consolidating QA/QC staff in the Office of the Inspector General, the Quality Initiatives Office, the Office of Management and Budget and the Office of Policy Planning. Coordinate with analysis in Recommendation # 3, Chapter 7.*	2	August 2001	FDOT
	7 – Consolidate area engineers positions	*Develop and begin implementation of plan for consolidating FDOT area engineers positions. Coordinate with analysis in Recommendation # 3, Chapter 7.*	3	December 2001	FDOT
	8 – Consider "corridor management" approach as an alternative to FDOT's current District organization	*Establish a review committee comprised of selected district and central office staff and external stakeholders to develop an alternative plan for regional administration of FDOT work following FIHS corridors, in lieu of geographic territories.*	2	August 2001	FDOT
	9 – Discontinue inspection of private airports, rail tracks and railroad equipment	*Develop and implement plan for eliminating FDOT airport and railroad inspector positions once appropriate legislation is enacted and agreements abrogated. Coordinate with analysis in Recommendation # 3, Chapter 7.*	3	September 2001	FDOT

9.5 REVENUE IMPACTS

Most of the revenue strategies in this report were developed to enhance funding available for transportation operations and capital improvements is presented in this section. Other implementation actions focus on the use of transportation revenues to improve regional planning and fund the deployment of Florida's statewide ITS plan.

REVENUE IMPACTS					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
3	1 – Evaluate revenue enhancement strategies	*Retain an appropriately qualified consultant to lead a study of long-term potential revenue enhancement strategies for funding Florida's planned transportation investments*	1	August 2001	FDOT with Consultant assistance
	2 – Establish a threshold for supporting funding needs for non-highway modes through STTF	*Review current and future non-highway transportation investment requirements and establish an appropriate, fiscally-balanced percentage of STTF funds to allocate to non-highway modes to finance selected operations or improvements.*	1	August 2001	FDOT
	3 – Consider expected available funding amounts when developing plans for expanding FIHS	*Revise FDOT's planning process to require a reevaluation of the needs defined in the FIHS Modal Plan and to assess the likely impacts of funding shortfalls on long-term system performance. Revise plan as necessary to reflect realistic project needs in line with available funding.*	1	August 2001	FDOT
4	2 – Consider legislative changes and additional funding assistance to encourage MPO's to collaborate on regional projects	*Identify financial incentives to encourage two or more existing MPO's to merge. Develop and carry out strategy for communicating proposed incentives to MPO's*	2	September 2001	FDOT with input from MPOAC
8	1 – Develop full-scale ITS Deployment Plan	*As part of FDOT's ITS Deployment Plan, develop realistic cost estimates for initial ITS implementation and for long-term operations and systems maintenance/upgrades.*	1	July 2001	FDOT with Consultant assistance

9.6 OTHER IMPROVEMENT STRATEGIES

Other improvement strategies not aligned with the five prior sections are presented below.

OTHER IMPROVEMENT STRATEGIES					
CH	**Recommendation**	**Actions**	**Priority**	**Implementation Completion Date**	**Resources**
8	2 – Establish an ITS advisory council to guide deployment of ITS in Florida	*Establish an ITS advisory council*	1	May 2001	FDOT with input from FTC and STO
	OTHER: Evaluate future roles and responsibilities of the FTC	*Evaluate three alternatives scenarios for the FTC. Select preferred operation and develop strategy for further implementation*	2	September 2001	FTC with Consultant assistance

A. COMPARATIVE ANALYSIS

To establish a foundation for evaluating FDOT's operations, a comparative analysis was completed as a part of this study. Relevant information was collected from neighboring states, and from states that are comparable to Florida in terms of transportation infrastructure, capital outlay and other characteristics. For each category of information collected, both the peer states average and the U.S. average are calculated and presented.

States selected for the comparative analysis include:

- Georgia
- North Carolina
- South Carolina
- Texas
- Virginia

Based on information obtained from the Federal Highway Administration (FHWA), these states ranked close to Florida in several categories. Additionally, with the exception of Texas, all other states are associated with Florida in the AASHTO's Southeast Region. Texas was included in this study due to its similarity with FDOT in many relevant categories.

State	Public Roads Lane-Miles	Interstate and State Bridges	Federal-Aid Roadways in Lane-Miles
Florida	**246,553**	**6,243**	**67,349**
Georgia	168,144	5,851	72,233
North Carolina	203,370	16,390	50,219
South Carolina	105,386	8,211	40,776
Texas	388,833	32,200	191,047
Virginia	156,793	11,321	53,918

Source: FHWA Table HM-48, HM-81,1998 and Better Roads Magazine, 1999.

As presented above, peer states were selected based upon some common characteristics with Florida. Georgia, North Carolina, and South Carolina were chosen due to their proximity with Florida – neighboring states often provide a relevant comparison as a result of similar climates and characteristics. Texas while larger in terms of land area and Federal-aid highway miles, is comparable to Florida in terms of population and mix of urban and rural areas. Similarly, Virginia also has similar mix of urban and rural area.

Additionally, factors such as capital expenditures for roads and bridges, and highway maintenance expenditures were taken into consideration when selecting these peer states. Florida has the second highest total capital outlay for bridges and roads in the nation, behind only California. Texas, Virginia, and Georgia also exhibit similar capital expenditure trends, all ranked in the upper 20 percent nationally.

Sources used for this analysis include:

- U.S. Department of Transportation Federal Highway Administration, Federal Highway Statistics 1998
- Better Roads Magazine, 1999
- Interviews with DOT personnel from all participating state transportation agencies

Based on the information collected, and analyses conducted, the project team has organized results into the following six categories:

- Highway System Size
- Expenditures
- Staffing
- System Conditions
- Congestion
- Safety

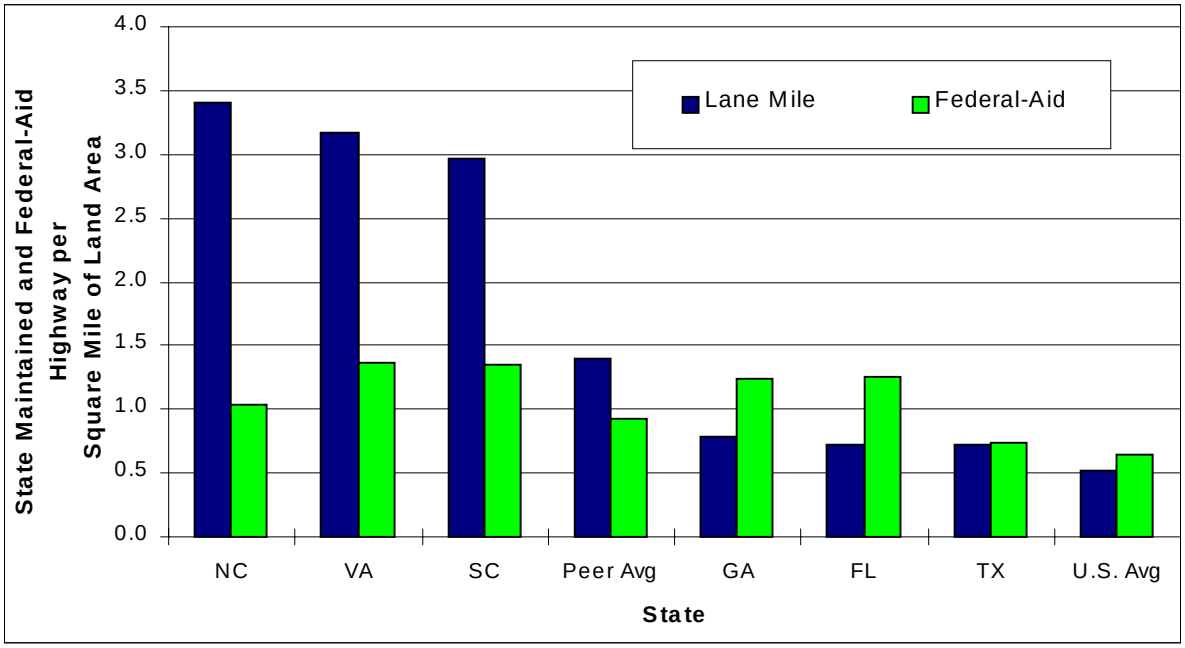
Note: Highway statistical information is not necessarily comparable across all states due to many state-to-state differences. As such, when making state level comparisons, it is inappropriate to use these statistics without recognizing those differences that impact comparability.

A.1 HIGHWAY SYSTEM SIZE

The objective here is to compare Florida with its peer states and the U.S. average in terms of the size of the highway system administered by each state.

Exhibit A-1 illustrates the total state administered highway and Federal-aid highway lane-miles per square mile of land area for Florida and its peer states.

Exhibit A-1: State Administered and Federal-Aid Highway per Square Mile of Land Area



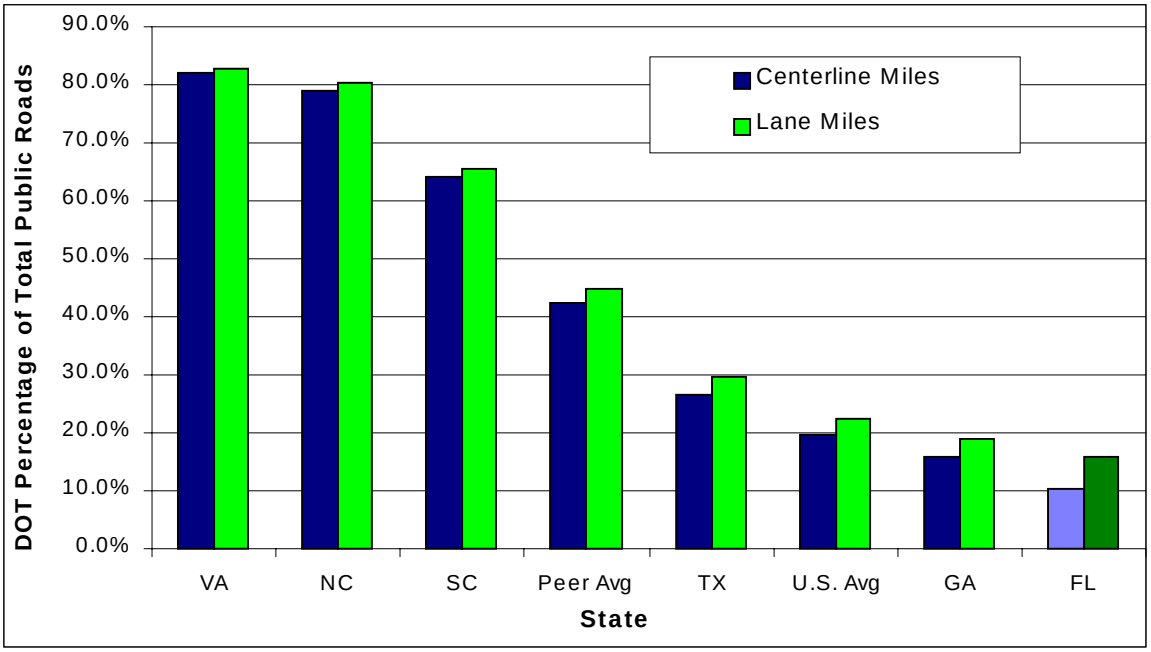
Source: FHWA Highway Statistics, 1998 Tables PS-1, HM-81, and HM-48

As shown above, Florida has a lower density of state maintained highways, lane-miles of highway per square mile of land area, compared to its peer states, except for the State of Texas. Florida is comparable to the national average, in terms of lane-miles of state administered highways per square mile of land area. States of North Carolina, Virginia, and South Carolina are responsible for maintaining a large secondary roads system, which brings their ratio of state maintained highways per square mile area higher than other states.

For lane-miles of Federal-aid highway per square mile of land area, Florida is comparable to its peer states and has twice as much Federal-aid highway lane-miles per square mile of land area compared to the national average.

Exhibit A-2 presents information regarding the percentage of the total public roads that makes up the total state transportation system. The objective here is to compare Florida with its peer states and the U.S. average in terms of the size of the State Highway System as a percentage of total public roads in the state.

Exhibit A-2: State Administered Highways as a Percentage of Total Public Roads



Source: FHWA Highway Statistics, 1998 Tables HM-20, HM-80 and HM-81

As indicated above, FDOT is responsible for approximately 10 percent of total centerline miles of public roads and approximately 16 percent of total lane-miles of public roads in Florida. All peer states are responsible for a higher percentage of public roads, within their respective states, compared to Florida. The U.S. average, average of all 50 state transportation agencies, indicates that, overall, 20 percent of total public roads, on a centerline basis, are being maintained by the state transportation agencies – almost twice that of Florida. Whereas, Florida's peer states maintain more than 40 percent of public roads – almost four times that of Florida.

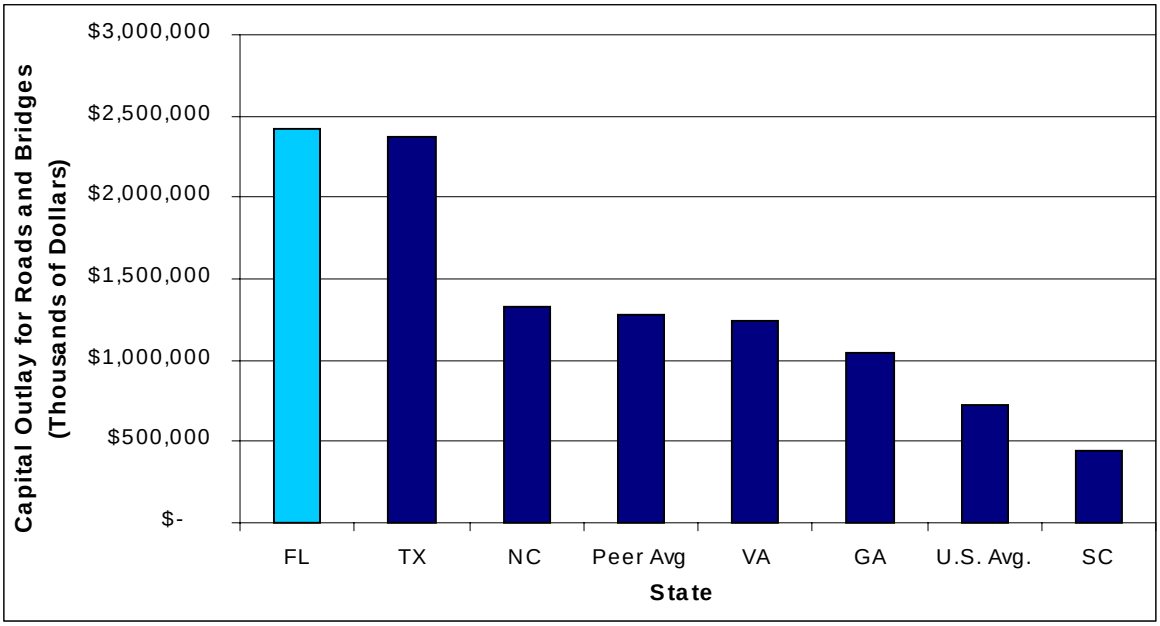
Florida ranks 40th in the nation in terms of the State Highway System as a percentage of the total centerline miles of public roads, and ranks 30th in the nation in terms of the State Highway System as a percentage of the total lane-miles of public roads within the state.

A.2 CAPITAL OUTLAY AND MAINTENANCE EXPENDITURES

The project team analyzed the annual capital outlay for roads and bridges, and annual expenditures related to maintenance and highway services for Florida and peer states. The objective here is to compare Florida's annual capital and maintenance disbursements for state administered highways with that of its peer states and the U.S. average. Additional information regarding capital outlay and maintenance expenditures per lane mile is presented in Chapter 2 – Department Overview.

Exhibit A-3 presents information regarding the annual capital outlay and highway maintenance expenditures for Florida and its peer states.

Exhibit A-3: Total Annual Capital Outlay for Roads and Bridges



Source: FHWA Highway Statistics, 1998 Table SF-4

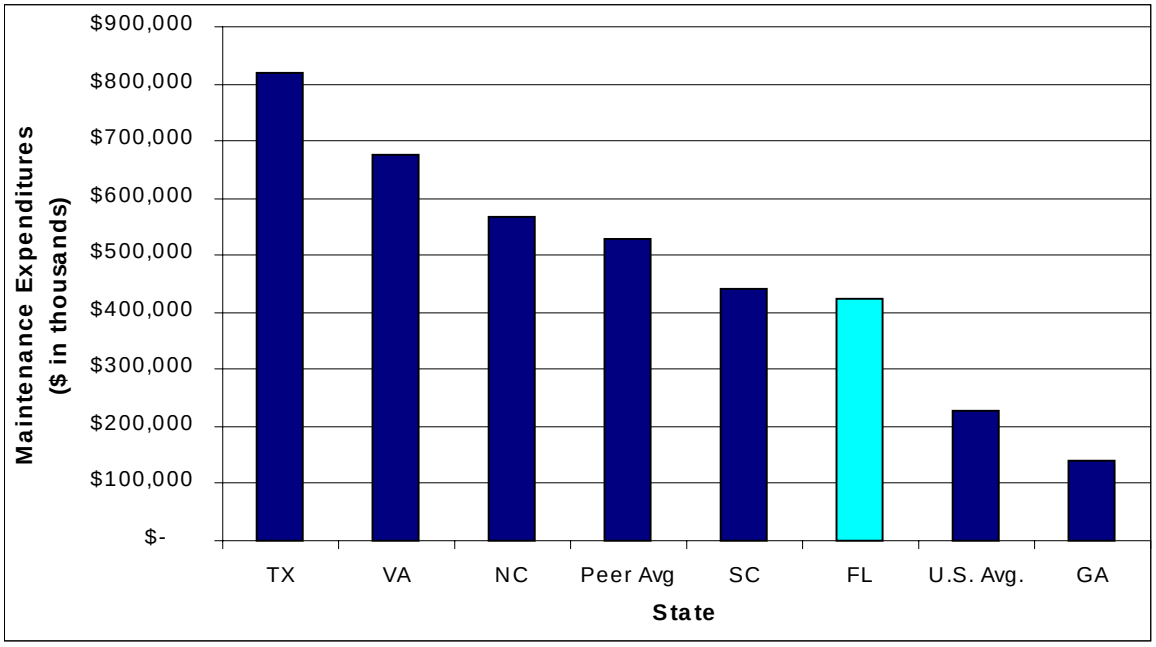
As presented above, Florida has the highest capital outlay compared to its peer states. According to the FHWA's Highway Statistics 1998, Florida ranks second in the nation in terms of the total annual capital outlay for roads and bridges. Florida's approximately $2.4 billion annual capital outlay for roads and bridges is nearly twice as much that of its peer states average. In terms of capital outlay for roads and bridges per lane mile, Florida spends more than three times the national average and nearly six times more than its peer states average – Chapter 2 of this report provides additional information regarding capital outlay for roads and bridges per lane mile for Florida and its peer states.

Florida spends almost 65 percent, almost 5 percent higher than its peer states and 10 percent higher than the U.S. average, of its total disbursements for state administered highways for capital outlay. Florida ranks 12th in the nation in terms of percentage of total disbursements for state administered highways spent on capital outlay for roads and bridges.

Exhibit A-4 presents information regarding the annual highway maintenance expenditures for Florida and its peer states. According to the FHWA's Highway Statistics 1998, Florida ranks seventh in the nation in terms of total annual maintenance expenditures.

Annual maintenance expenditures can very between States depending upon a number of factors including difference such as climate and geography, how each State defines maintenance versus capital expenditures, traffic intensity and percent of trucks, degree of urbanization, types of pavement being maintained, and the level of system responsibility retained by the State versus that given to other levels of government.

Exhibit A-4: Annual Maintenance Expenditures



Source: FHWA Highway Statistics, 1998 Tables HM-81 & SF-4

As presented above, Florida's annual highway maintenance expenditures, worth approximately $425 million, is lower than that of its peer states, except for Georgia. According to FHWA's Highway Statistics 1998, Florida ranks seventh in the nation in terms of total annual highway maintenance expenditures. Annual expenditures for highway maintenance are closely related to the size and condition of the highway system, vehicle miles traveled, and the level of service provided. In terms of annual highway maintenance expenditures per lane mile, Florida spends nearly two times the national average and more than two and half times that of its peer states – Chapter 2 of this report provides additional information regarding annual maintenance expenditures per lane mile for Florida and its peer states.

Florida spends approximately 11.3 percent, approximately 10 percent lower than the average of its peer states, and about 6 percent lower than the U.S. average, of its total disbursements for state administered highways for highway maintenance activities. Florida ranks 40th in the nation in terms of percentage of total disbursements for state administered highways spent on highway maintenance activities.

Overall, Exhibits A-1 through A-4 illustrate that FDOT spends a large percentage of its annual disbursement as capital outlay for roads and bridges. Although, FDOT is responsible for approximately 10 percent of the total public roads in Florida, FDOT's annual capital and maintenance expenditures rank among the highest in the nation, both in terms of the total capital outlay and maintenance disbursements for the state administered highways and capital and maintenance expenditures per lane mile basis.

A.3 STAFFING

The project team collected staffing information from all peer states through surveys conducted over the course of this study. The objective here is to analyze the current staffing level of FDOT with that of its peer states.

Exhibit A-5A presents a staffing comparison between FDOT and its peer states' transportation agencies. Staffing numbers presented in the "Other" category include staffing for permitting, highway safety, toll collection, etc.

Exhibit A-5A: Staffing Comparison

Function	FL	NC	GA	SC	TX	VA	Peer Avg.
Planning	293	229	30	69	430	104	172
Engineering and Design	1,511	1,673	290	736	2,397	1,295	1,278
Right of Way	499	325	196	107	276	310	243
Traffic Engineering	214	226	162	102	100	670	252
Materials & Research	529	171	371	92	254	299	237
Construction	1,292	2,364	531	565	1,911	646	1,203
Maintenance	3,044	6,943	2,706	3,445	6,465	5,334	4,979
Administration							
Personnel	190	60	67	20	233	138	104
Legal Services	116	48	4	19	11	33	23
Information Technology	184	111	40	76	504	217	190
Fiscal Services	328	185	72	48	304	129	148
Public Information	37	20	12	9	28	30	20
Minority Affairs	37	6	3	8	16	21	11
Building Maintenance	32	22	14	10	24	18	18
Other	2,070	439	1,402	109	1,474	1,427	970
Total Agency Staff	**10,376**	**12,822**	**5,900**	**5,415**	**14,427**	**10,671**	**9,847**

Source: KPMG survey of state transportation agencies

Exhibit A-5B presents a staffing distribution by functional area for FDOT and its peer state transportation agencies.

Exhibit A-5A: Staffing Distribution by Functional Area

Function	FL	NC	GA	SC	TX	VA	Peer Avg.
Planning	2.82%	1.79%	0.51%	1.27%	2.98%	0.97%	1.75%
Engineering and Design	14.56%	13.05%	4.92%	13.59%	16.61%	12.14%	12.98%
Right of Way	4.81%	2.53%	3.32%	1.98%	1.91%	2.91%	2.47%
Traffic Engineering	2.06%	1.76%	2.75%	1.88%	0.69%	6.28%	2.56%
Materials & Research	5.10%	1.33%	6.29%	1.70%	1.76%	2.80%	2.41%
Construction	12.45%	18.44%	9.00%	10.43%	13.25%	6.05%	12.22%
Maintenance	29.34%	54.15%	45.86%	63.62%	44.81%	49.99%	50.56%
Administration							
Personnel	1.83%	0.47%	1.14%	0.37%	1.62%	1.29%	1.06%
Legal Services	1.12%	0.37%	0.07%	0.35%	0.08%	0.31%	0.23%
Information Technology	1.77%	0.87%	0.68%	1.40%	3.49%	2.03%	1.93%
Fiscal Services	3.16%	1.44%	1.22%	0.89%	2.11%	1.21%	1.50%
Public Information	0.36%	0.16%	0.20%	0.17%	0.19%	0.28%	0.20%
Minority Affairs	0.36%	0.05%	0.05%	0.15%	0.11%	0.20%	0.11%
Building Maintenance	0.31%	0.17%	0.24%	0.18%	0.17%	0.17%	0.18%
Other	19.95%	3.42%	23.76%	2.01%	10.22%	13.37%	9.85%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

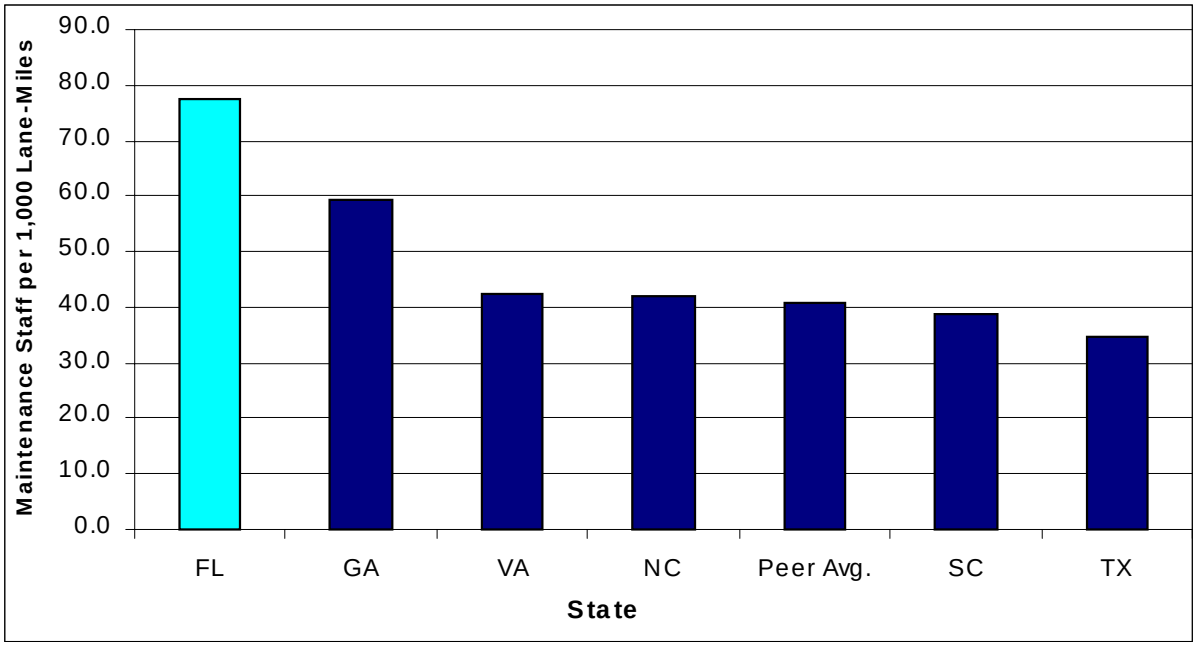
Source: KPMG survey of state transportation agencies

Many state-to-state differences and factors such as, level of outsourcing, and service levels make comparison of staffing between state transportation agencies somewhat of a difficult task. However, indicators such as, maintenance staff per lane-mile of state administered roads and the capital outlay per technical and support staff serves as good measures. For the purpose of this analysis, the project team evaluated FDOT's staffing strength in terms of:

- Highway maintenance staffing per lane-mile of state administered highways
- Million dollars of annual capital outlay for roads and bridges per each technical and support staff (planning, engineering and design, right-of-way, construction, and materials and research staff)

Exhibit A-6 presents the total staffing strength per lane-mile of state administered highways for Florida and its peer states.

Exhibit A-6: Staffing Strength per 1,000 Lane-Mile of State Administered Highways



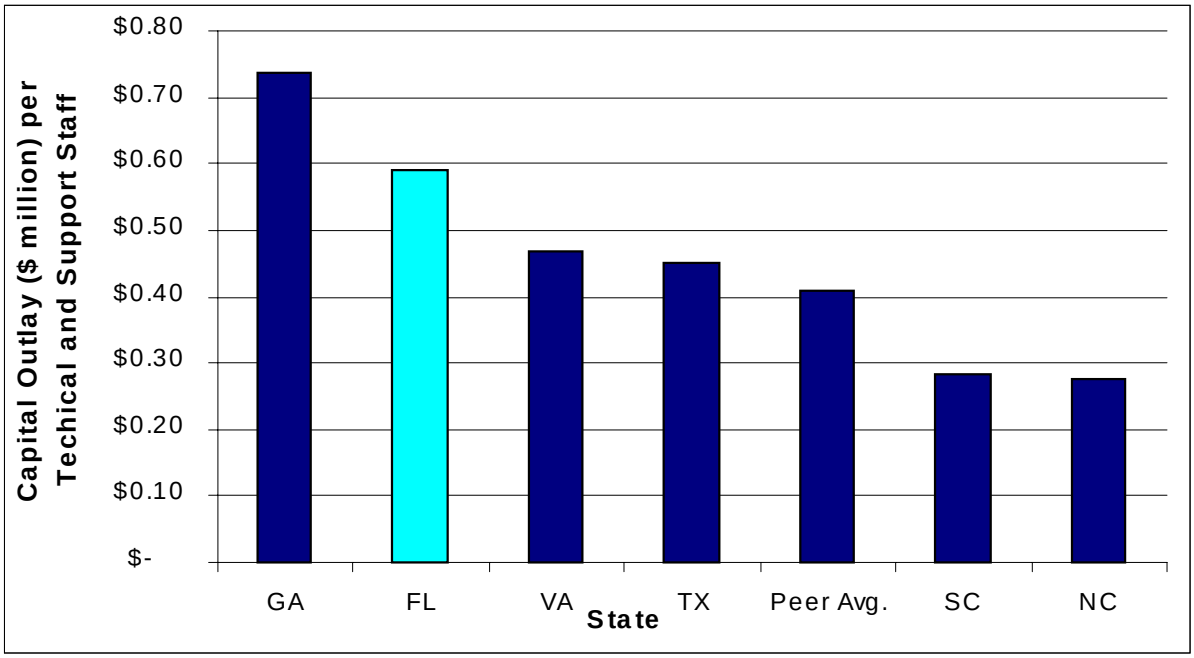
Source: KPMG survey of state transportation agencies

As presented above, Florida has the highest number of highway maintenance staff per 1,000 lane-mile of the State Highway System. The project team recognizes that the higher level of service and maintenance of urban roads require significant amount of resources; however, these factors could not justify the high level of staffing, especially considering that FDOT outsources approximately 70 percent of its highway maintenance activities (outsourcing of highway maintenance activities among peer states ranges between 35 and 45 percent).

The annual capital outlay for roads and bridges is a good measure to evaluate technical and support resources applied towards execution of the capital program. Execution of the capital program involves various activities including planning, engineering and design, right-of-way, construction, and materials and research. For the purpose of this analysis, the project team evaluated the total technical and support resources (planning, engineering and design, right-of-way, construction, and materials and research staffing) and the size of the annual capital outlay for roads and bridges for Florida and its peer states.

Exhibit A-7 presents millions of dollars of capital outlay for roads and bridges per each technical and support staff (planning, engineering and design, right-of-way, construction, and materials and research staffing) for Florida and its peer states.

Exhibit A-7: Capital Outlay in Million Dollars per Technical and Support Staff



Source: KPMG survey of state transportation agencies and FHWA Highway Statistics, 1998

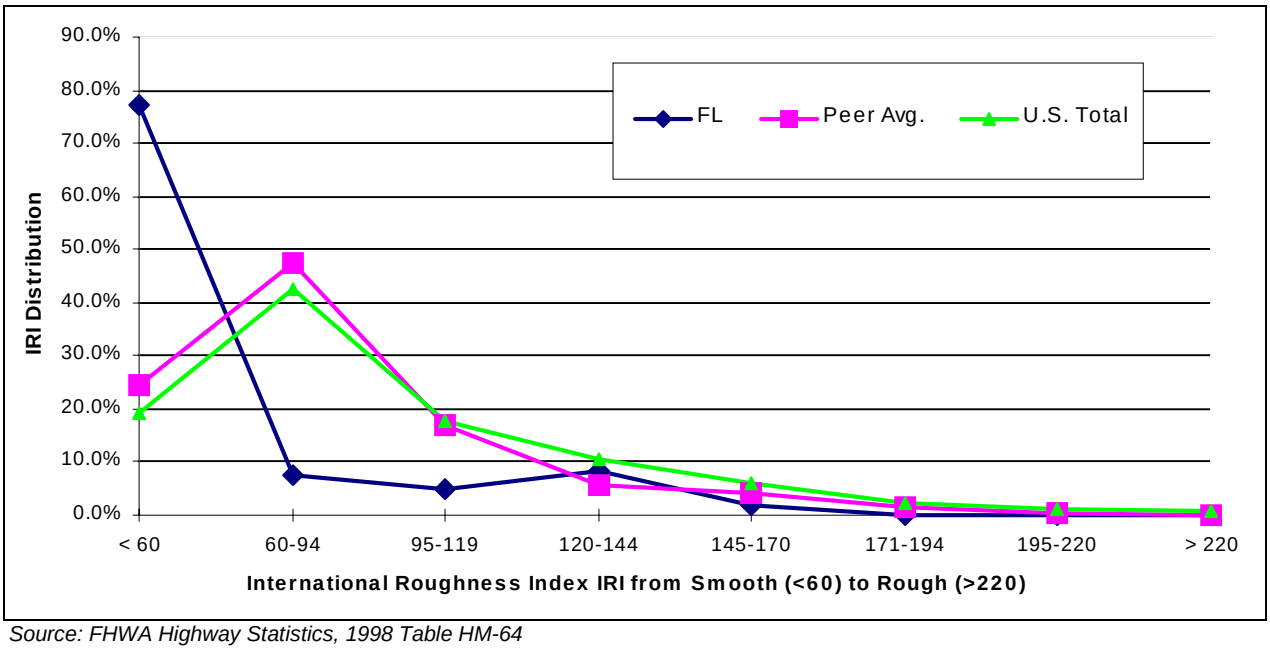
Overall, Florida compares favorably with its peer states in terms of total capital outlay per technical and support staff. However, considering that FDOT outsources a large majority of its planning, engineering and design, and construction engineering inspection activities, one would expect Florida to rank substantially higher when compared to its peer states. Our survey of peer states indicated that the level of outsourcing in planning, engineering and design, and construction engineering inspection ranges between 30 and 45 percent for peer states.

A.4 TRANSPORTATION SYSTEM CONDITIONS

To determine the condition of the highway system, International Roughness Index (IRI) information was obtained for each state and the U.S. average for rural and urban interstates. The IRI rating system measures road smoothness with low number ratings representing very smooth roads and high ratings representing rough road conditions. Our analysis indicated that the overall conditions of Florida's roads are much better compared to its peer states.

Exhibits A-8 and A-9 present distribution of reported IRI for both rural and urban interstates respectively for FDOT and its peer states.

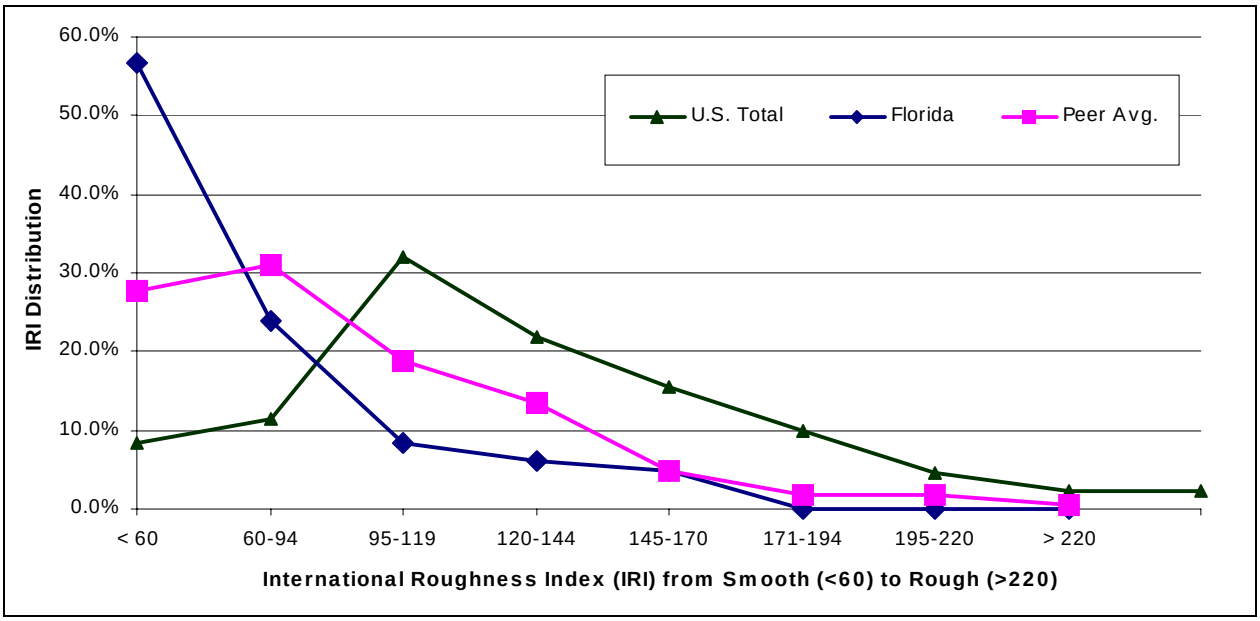
Exhibit A-8: Distribution of Reported IRI for Rural Interstates



Source: FHWA Highway Statistics, 1998 Table HM-64

As indicated above, Florida's rural interstate roads are in much better condition, with the majority of roads on the smoother (lower) end of the scale, compared to its peer states and the national average. Better road condition is supported with the fact that Florida ranks the highest among it peers in terms of capital and maintenance expenditures on a per lane-mile basis.

Exhibit A-9: Distribution of Reported IRI for Urban Interstates



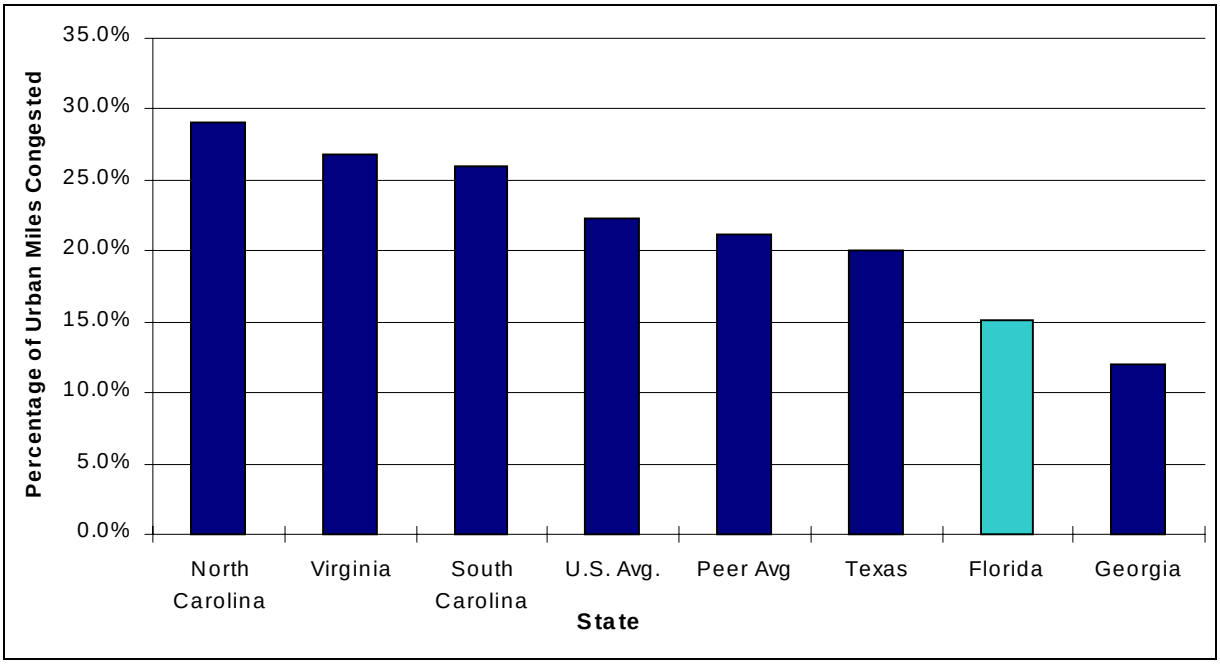
Source: FHWA Highway Statistics, 1998 Table HM-64

A.5 CONGESTION

Over the past ten years, the number of vehicle miles has been growing faster than the number of new lane miles added to the State Highway System. Typically, congestion occurs when the volume of traffic to service-flow ratio exceeds 80 percent.

Exhibit A-10 presents the percentage of major urban roads – interstate, other freeways and expressways, and other principal arterial – congested, as measured by traffic volume to service flow ratio, for Florida and its peer states.

Exhibit A-10: Percentage of Major Urban Roads Congested



Source: FHWA Highway Statistics, 1998 Table HM-61

Reportedly, Florida's urban roads are less congested compared to its peer states and the national average. However, Florida's interstate roads are increasingly getting congested.

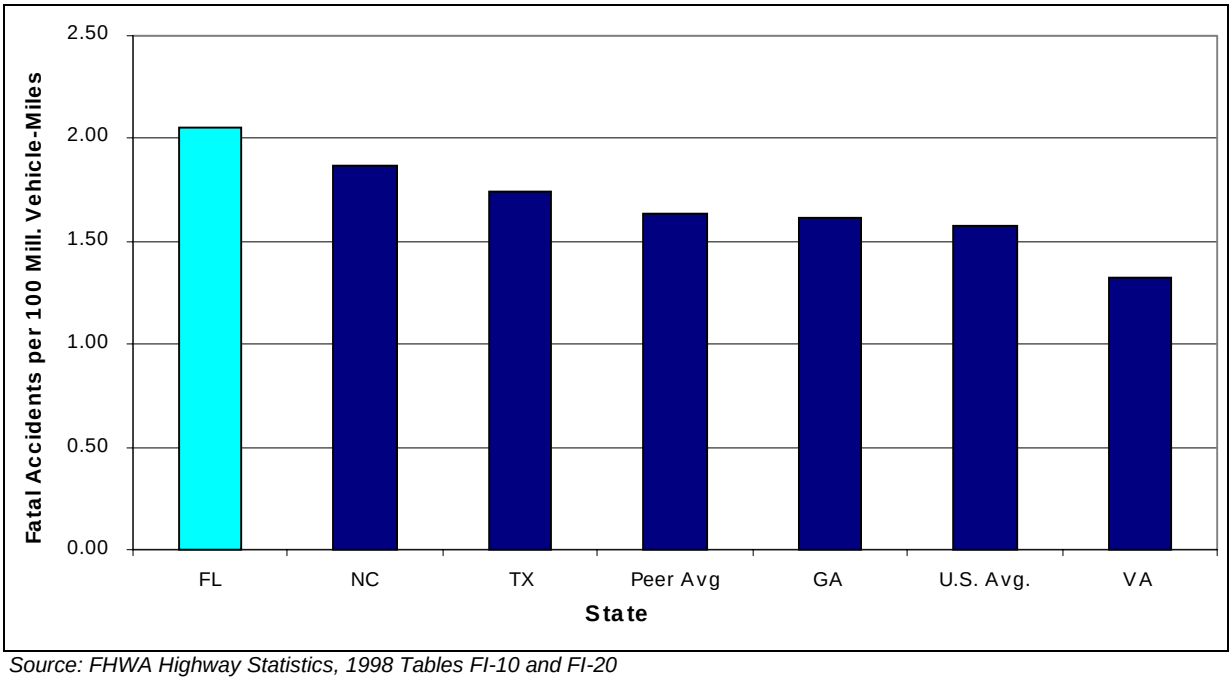
A.6 SAFETY

Highway safety is impacted by several factors, such as vehicle condition, weather, highway condition, driver skills or impairment, and presence and use of safety equipment – state DOTs have limited control over these factors. The project team analyzed the safety of states roads by calculating fatal accidents per 100 million vehicle miles for Florida and its peer states. On average, 2,900 fatalities occur annually on Florida's highway. Florida ranks third in the nation, behind Texas and California, in terms of persons fatally injured in motor vehicle crashes annually. FDOT has established a goal of reducing the highway fatality rate to 1.73 fatalities per 100 million vehicle miles traveled by 2006.

To achieve this goal, FDOT has taken a number of positive measures to improve highway safety. FDOT's data indicates that the percentage of fatal crashes on the SHS where road-related conditions were a contributing factor was less than 1.0 percent in 1998.

Exhibit A-11 presents the fatal accident rate per 100 million vehicle miles traveled.

Exhibit A-11: Fatal Accident Rate per 100 million Vehicle-Miles Traveled



Source: FHWA Highway Statistics, 1998 Tables FI-10 and FI-20

A.7 SUPPORTING DATA

Data used for conducting the comparative analysis, in the following areas, is presented in various exhibits. Additional data can be found in the Federal Highway Statistics, 1998 publication.

- State rankings for bridge conditions
- Pavement condition for urban and rural roads – as measured by IRI
- State ranking for miles by volume-service flow ratio for urban roads

Exhibit A-12: Substandard Bridges

State	Total Interstate & State Bridges	Total Substandard	% Substandard	Total Township/City/ County Bridges	Total Substandard	% Sunstandard	Combined Total All Bridges	Total Substandard	% Substandard
Alabama	5,527	1,334	24%	10,068	3,398	34%	15,595	4,732	30%
Alaska	819	171	21%	133	48	36%	952	219	23%
Arizona	4,243	144	3%	2,366	192	8%	6,609	336	5%
Arkansas	6,957	1,494	21%	5,361	1,963	37%	12,318	3,457	28%
California	12,176	1,756	14%	12,002	2,611	22%	24,178	4,367	18%
Colorado	3,691	558	15%	4,473	785	18%	8,164	1,343	16%
Connecticut	2,907	143	5%	1,240	234	19%	4,147	377	9%
Deleware	795	152	19%	7	4	57%	802	156	19%
Florida	**6,243**	**1,376**	**22%**	**4,947**	**1,532**	**31%**	**11,190**	**2,908**	**26%**
Georgia	5,851	1,028	18%	8,522	2,448	29%	14,373	3,476	24%
Hawaii	734	369	50%	400	176	44%	1,134	545	48%
Idaho	1,247	259	21%	2,246	417	19%	3,493	676	19%
Illinois	8,066	1,972	24%	17,582	3,603	20%	25,648	5,575	22%
Indiana	5,478	877	16%	12,498	3,784	30%	17,976	4,661	26%
Iowa	4,052	505	12%	21,057	6,593	31%	25,109	7,098	28%
Kansas	5,274	910	17%	20,798	5,916	28%	26,072	6,826	26%
Kentucky	9,034	2,781	31%	4,668	1,793	38%	13,702	4,574	33%
Louisiana	7,927	2,385	30%	5,738	2,469	43%	13,665	4,854	36%
Maine	1,943	562	29%	314	185	59%	2,257	747	33%
Maryland	2,697	671	25%	2,056	705	34%	4,753	1,376	29%
Massachusetts	3,449	1,261	37%	1,541	581	38%	4,990	1,842	37%
Michigan	4,331	1,510	35%	6,440	1,951	30%	10,771	3,461	32%
Minnesota	3,503	434	12%	9,241	1,606	17%	12,744	2,040	16%
Mississippi	5,319	1,311	25%	11,116	4,652	42%	16,435	5,963	36%
Missouri	9,901	2,821	28%	13,293	5,897	44%	23,194	8,718	38%
Montana	2,361	297	13%	2,404	727	30%	4,765	1,024	21%
Nebraska	3,479	311	9%	12,236	4,423	36%	15,715	4,734	30%
Nevada	1,008	62	6%	373	38	10%	1,381	100	7%
New Hampshire	1,441	302	21%	944	472	50%	2,385	774	32%
New Jersey	2,388	539	23%	3,942	1,322	34%	6,330	1,861	29%
New Mexico	2,940	995	34%	665	262	39%	3,605	1,257	35%
New York	7,789	2,233	29%	11,717	5,465	47%	19,506	7,698	39%
North Carolina	16,390	5,759	35%	645	183	28%	17,035	5,942	35%
North Dakota	1,097	74	7%	3,413	1,119	33%	4,510	1,193	26%
Ohio	11,579	3,359	29%	18,706	8,693	46%	30,285	12,052	40%
Oklahoma	7,386	1,613	22%	15,479	7,588	49%	22,865	9,201	40%
Oregon	2,650	757	29%	3,838	744	19%	6,488	1,501	23%
Pennsylvania	16,336	6,127	38%	6,869	3,031	44%	23,205	9,158	39%
Rhode Island	602	364	60%	148	98	66%	750	462	62%
South Carolina	8,211	1,634	20%	843	334	40%	9,054	1,968	22%
South Dakota	1,792	263	15%	4,110	1,482	36%	5,902	1,745	30%
Tennessee	7,442	1,731	23%	11,961	3,513	29%	19,403	5,244	27%
Texas	32,200	5,650	18%	16,300	7,170	44%	48,500	12,820	26%
Utah	1,735	456	26%	936	255	27%	2,671	711	27%
Vermont	1,075	336	31%	1,581	664	42%	2,656	1,000	38%
Virginia	11,321	2,828	25%	1,040	279	27%	12,361	3,107	25%
Washington	3,139	721	23%	4,055	844	21%	7,194	1,565	22%
West Virginia	6,475	2,650	41%	152	111	73%	6,627	2,761	42%
Wisconsin	4,779	618	13%	8,564	1,914	22%	13,343	2,532	19%
Wyoming	1,935	126	7%	861	331	38%	2,796	457	16%

Source: Better Roads Magazine 1999

Exhibit A-13: State Rankings of Bridge Conditions

State	% Substandard Bridges	U.S. Rank
Arizona	3%	1
Connecticut	5%	2
Nevada	6%	3
North Dakota	7%	4
Wyoming	7%	4
Nebraska	9%	6
Iowa	12%	7
Minnesota	12%	7
Montana	13%	9
Wisconsin	13%	9
California	14%	11
Colorado	15%	12
South Dakota	15%	12
Indiana	16%	14
Kansas	17%	15
Georgia	18%	16
Texas	18%	16
Delaware	19%	18
South Carolina	20%	19
Alaska	21%	20
Arkansas	21%	20
Idaho	21%	20
New Hampshire	21%	20
Florida	**22%**	**24**
Oklahoma	22%	24
New Jersey	23%	26
Tennessee	23%	26
Washington	23%	26
Alabama	24%	29
Illinois	24%	29
Maryland	25%	31
Mississippi	25%	31
Virginia	25%	31
Utah	26%	34
Missouri	28%	35
Maine	29%	36
New York	29%	36
Ohio	29%	36
Oregon	29%	36
Louisiana	30%	40
Kentucky	31%	41
Vermont	31%	41
New Mexico	34%	43
Michigan	35%	44
North Carolina	35%	44
District of Columbia	36%	46
Massachusetts	37%	47
Pennsylvania	38%	48
West Virginia	41%	49
Hawaii	50%	50
Rhode Island	60%	51

Source: Better Roads Magazine, 1999

Exhibit A-14: Persons Fatally Injured in Motor Vehicle Crashes - 1998

State	Fatalities	DVMT (thousands)	% of Statewide	Annual VMT	Fatality Rate per 100 Million VMT	Rank
Massachusetts	406	70,661	49.8%	51,789,688,755	0.7839	1
Rhode Island	74	16,327	74.7%	7,977,717,537	0.9276	2
Maryland	522	90,927	68.7%	48,309,104,803	1.0805	3
New Hampshire	126	22,976	72.5%	11,567,227,586	1.0893	4
New Jersey	716	76,488	43.3%	64,476,027,714	1.1105	5
Connecticut	329	62,086	77.3%	29,316,157,827	1.1222	6
California	3,494	419,488	53.5%	286,192,747,664	1.2209	7
New York	1,498	177,386	52.8%	122,624,791,667	1.2216	8
Wisconsin	709	91,280	58.8%	56,661,904,762	1.2513	9
North Dakota	92	13,054	65.0%	7,330,323,077	1.2551	10
Washington	657	84,949	59.7%	51,936,993,300	1.2650	11
Indiana	878	122,302	64.8%	68,889,243,827	1.2745	12
Minnesota	650	90,390	66.5%	49,612,556,391	1.3102	13
Virginia	934	156,793	81.0%	70,653,635,802	1.3219	14
Ohio	1,415	180,964	63.0%	104,844,222,222	1.3496	15
Illinois	1,393	167,062	60.2%	101,291,744,186	1.3752	16
Delaware	115	21,408	95.2%	8,207,899,160	1.4011	17
Maine	190	30,145	81.3%	13,533,733,087	1.4039	18
Michigan	1,362	156,727	60.9%	93,933,259,442	1.4500	19
Georgia	1,421	168,144	63.3%	96,955,071,090	1.4656	20
Pennsylvania	1,478	208,569	76.2%	99,905,098,425	1.4794	21
Hawaii	120	14,313	65.4%	7,988,142,202	1.5022	22
Iowa	441	48,357	61.0%	28,934,926,230	1.5241	23
Alaska	70	10,163	82.2%	4,512,767,640	1.5512	24
Vermont	103	12,252	67.8%	6,595,840,708	1.5616	25
Colorado	626	67,038	62.3%	39,275,874,799	1.5939	26
Oregon	538	54,696	59.8%	33,384,682,274	1.6115	27
Utah	350	42,055	72.2%	21,260,491,690	1.6462	28
Texas	3,577	388,833	68.9%	205,985,551,524	1.7365	29
Nebraska	315	30,950	64.3%	17,568,818,040	1.7929	30
Oklahoma	755	66,198	57.5%	42,021,339,130	1.7967	31
Missouri	1,168	122,989	69.6%	64,498,541,667	1.8109	32
Kansas	493	40,527	54.6%	27,092,225,275	1.8197	33
Kentucky	858	101,682	79.7%	46,567,038,896	1.8425	34
North Carolina	1,596	203,370	87.0%	85,321,896,552	1.8706	35
Wyoming	151	16,002	72.7%	8,034,016,506	1.8795	36
West Virginia	354	50,933	99.6%	18,665,205,823	1.8966	37
New Mexico	424	39,800	65.5%	22,178,625,954	1.9118	38
Idaho	258	20,313	55.2%	13,431,603,261	1.9208	39
Alabama	1,064	86,673	57.3%	55,210,549,738	1.9272	40
Tennessee	1,211	123,684	72.2%	62,527,229,917	1.9368	41
South Dakota	165	15,613	70.4%	8,094,808,239	2.0383	42
Florida	**2,824**	**246,553**	**65.5%**	**137,392,129,771**	**2.0554**	**43**
Nevada	361	29,471	62.2%	17,294,075,563	2.0874	44
South Carolina	903	105,386	89.8%	42,835,066,815	2.1081	45
Arizona	971	59,572	47.8%	45,489,079,498	2.1346	46
Arkansas	621	63,042	81.2%	28,337,844,828	2.1914	47
Louisiana	920	95,705	86.6%	40,337,557,737	2.2808	48
Montana	237	16,311	62.1%	9,586,980,676	2.4721	49
Mississippi	945	57,034	60.9%	34,182,939,245	2.7645	50
U.S. Total	**40,878**	**4,657,641**	**64.9%**	**2,619,474,522,342**	**1.5605**	**N/A**

Source: FHWA Federal Highway Statistics, 1998 Table FI-20

Exhibit A-15: Capital and Maintenance Allocation for Roads and Bridges

State	Percent of Total Disbursements allocated to Capital Outlay for Roads and Bridges	Capital Outlay for Roads and Bridges Ranking	State	Percent of Total Disbursements allocated to Maintenance and Highway Services	Maintenance and Highway Services Ranking
Utah	80.1%	1	Pennsylvania	32.1%	1
Mississippi	73.2%	2	Alaska	30.7%	2
North Dakota	71.8%	3	West Virginia	30.4%	3
Arkansas	71.3%	4	Maine	28.3%	4
South Dakota	71.0%	5	Virginia	28.0%	5
Nebraska	70.4%	6	Vermont	27.1%	6
Iowa	67.8%	7	Minnesota	26.5%	7
Georgia	67.6%	8	New Hampshire	26.5%	8
Colorado	67.3%	9	Wyoming	26.4%	9
Tennessee	66.0%	10	North Carolina	25.3%	10
Idaho	65.1%	11	Indiana	23.4%	11
Florida	**64.8%**	**12**	Oregon	22.5%	12
Missouri	64.6%	13	Missouri	22.1%	13
Wyoming	64.0%	14	Texas	20.9%	14
Hawaii	63.3%	15	Idaho	20.6%	15
Alabama	63.1%	16	Alabama	20.4%	16
Wisconsin	62.5%	17	South Carolina	20.2%	17
South Carolina	62.1%	18	Oklahoma	20.1%	18
Arizona	61.6%	19	Nevada	20.1%	19
Indiana	61.1%	20	Tennessee	19.7%	20
Montana	61.0%	21	Arkansas	19.3%	21
Texas	60.3%	22	Montana	19.2%	22
Oregon	59.6%	23	Colorado	18.9%	23
North Carolina	59.2%	24	Washington	18.2%	24
Oklahoma	58.1%	25	Nebraska	16.7%	25
Massachusetts	57.3%	26	Maryland	16.5%	26
Nevada	56.3%	27	South Dakota	16.2%	27
Alaska	56.2%	28	New Jersey	16.1%	28
West Virginia	56.0%	29	Iowa	16.0%	29
Kentucky	54.7%	30	Kentucky	16.0%	30
Ohio	54.6%	31	Deleware	15.7%	31
Maryland	54.0%	32	New York	15.6%	32
Minnesota	53.6%	33	Wisconsin	15.0%	33
Rhode Island	53.1%	34	California	14.6%	34
California	52.5%	35	Illinois	14.0%	35
Washington	52.5%	36	Rhode Island	13.9%	36
Kansas	51.9%	37	Ohio	13.4%	37
Virginia	51.4%	38	New Mexico	12.2%	38
New Mexico	51.0%	39	North Dakota	11.9%	39
Michigan	49.8%	40	**Florida**	**11.3%**	**40**
Illinois	48.0%	41	Mississippi	11.1%	41
Louisiana	47.5%	42	Michigan	11.1%	42
Vermont	46.0%	43	Louisiana	11.1%	43
New Hampshire	45.4%	44	Kansas	10.6%	44
New York	45.0%	45	Georgia	9.0%	45
Pennsylvania	41.6%	46	Utah	8.9%	46
Maine	39.5%	47	Arizona	8.1%	47
Deleware	38.7%	48	Hawaii	7.1%	48
Connecticut	35.4%	49	Massachusetts	6.9%	49
New Jersey	32.0%	50	Connecticut	5.7%	50
Total U.S.	**$36,265,236.00**			**$11,439,251.00**	
	54.60%			**17.20%**	

Source: FHWA Highway Statistics, 1998 Table SF-4

Exhibit A-16: Volume-Service Flow Ratio – Urban Highways

State	Interstate		Other Free. & Express Ways		Other Principal Arterial		Total Miles Congested	Total # of Road Miles	% Miles Congested	U.S. Ranking
	0.80-0.95	> 0.95	0.80-0.95	> 0.95	0.80-0.95	> 0.95				
North Dakota	0	0	0	0	2	0	2	204	0.98%	1
South Dakota	0	0	0	0	2	0	2	181	1.10%	2
Wyoming	0	0	0	0	4	0	4	294	1.36%	3
Iowa	14	9	0	0	5	5	33	851	3.88%	4
Montana	0	0	0	0	10	5	15	231	6.49%	5
Kansas	9	8	6	3	18	21	65	957	6.79%	6
West Virginia	2	0	0	0	15	6	23	304	7.57%	7
Mississippi	12	3	0	0	40	16	71	796	8.92%	8
Delaware	3	8	0	0	8	1	20	186	10.75%	9
Oklahoma	16	24	24	11	37	23	135	1,145	11.79%	10
Utah	6	8	3	0	19	18	54	454	11.89%	11
New Mexico	5	15	0	0	24	31	75	628	11.94%	12
Georgia	34	21	9	1	63	154	282	2,350	12.00%	13
Maine	3	1	0	0	11	16	31	244	12.70%	14
Arizona	7	11	13	14	57	65	167	1,302	12.83%	15
Alabama	44	33	2	3	53	38	173	1,320	13.11%	16
Arkansas	7	23	1	10	41	30	112	840	13.33%	17
Nebraska	9	1	3	0	24	29	66	478	13.81%	18
Oregon	35	29	10	13	18	22	127	857	14.82%	19
Rhode Island	7	18	7	3	20	12	67	452	14.82%	19
Florida	**67**	**110**	**30**	**30**	**198**	**101**	**536**	**3,560**	**15.06%**	**21**
Idaho	7	7	0	0	19	21	54	343	15.74%	22
Alaska	4	2	0	0	3	10	19	110	17.27%	23
Missouri	103	52	26	15	52	54	302	1,737	17.39%	24
Vermont	0	0	1	1	20	7	29	157	18.47%	25
Wisconsin	22	36	20	6	73	149	306	1,656	18.48%	26
Nevada	12	13	2	9	16	15	67	353	18.98%	27
Pennsylvania	60	79	39	19	170	286	653	3,281	19.90%	28
Texas	251	207	202	140	339	276	1,415	7,079	19.99%	29
Indiana	7	27	0	11	224	148	417	1,997	20.88%	30
New Hampshire	3	11	2	5	33	6	60	261	22.99%	31
Tennessee	56	87	13	10	102	148	416	1,768	23.53%	32
Ohio	188	191	30	16	187	130	742	3,085	24.05%	33
Michigan	105	82	21	33	266	176	683	2,693	25.36%	34
Illinois	97	183	3	7	324	227	841	3,315	25.37%	35
South Carolina	44	31	18	7	57	82	239	922	25.92%	36
California	250	384	289	288	454	516	2,181	8,310	26.25%	37
Hawaii	9	6	7	5	28	8	63	238	26.47%	38
Virginia	104	59	17	12	93	158	443	1,654	26.78%	39
Connecticut	60	47	23	28	51	73	282	1,049	26.88%	40
Colorado	20	49	49	38	106	81	343	1,263	27.16%	41
Louisiana	37	25	2	3	67	172	306	1,081	28.31%	42
New York	103	128	36	166	297	416	1,146	3,962	28.92%	43
North Carolina	53	79	28	61	152	211	584	2,008	29.08%	44
Washington	81	46	29	62	89	200	507	1,674	30.29%	45
Kentucky	33	50	10	5	77	124	299	972	30.76%	46
Massachusetts	73	72	34	7	218	262	666	2,165	30.76%	46
Maryland	98	44	70	18	77	122	429	1,345	31.90%	48
Minnesota	71	75	16	46	34	47	289	888	32.55%	49
New Jersey	68	90	35	73	132	477	875	1,922	45.53%	50
U.S. Total	**2,198**	**2,388**	**1,088**	**1,164**	**4,182**	**4,915**	**15,935**	**66,341**	**24.02%**	**N/A**

Source: FHWA Highway Statistics, 1998 Table HM-61

B. MANAGEMENT SURVEY RESULTS

In the course of this study, an "On-line" survey was sent to approximately 150 FDOT executive team members, managers and supervisors with responsibilities relevant to the scope of this study. The project team received 90 responses – a response rate of 60 percent. The purpose of this survey was to gather information regarding the Department's day-to-day operations from the perspective of those actually managing/conducting the work. The survey covered the following areas:

- Organizational structure
- Policies, procedures and practices
- Performance measures
- Outsourcing

In each section, respondents were requested to select an appropriate answer for a total of five to six pertinent statements. For each statement, the responder had the option of selecting from one of the five responses listed below:

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Survey results are presented in the following exhibits.

Exhibit B-1: Survey Results – Organizational Structure

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The Current Organization Structure supports the Department's mission and vision efficiently and effectively	17.0%	59.0%	15.0%	0.0%	9.0%
Reporting Relationships are clearly defined in my work unit	55.0%	38.0%	5.0%	0.0%	2.0%
The Staff to Manager/Supervisor ratio is appropriate for my work unit	25.0%	59.0%	9.0%	0.0%	7.0%
The work performed in my unit is unnecessarily fragmented or duplicated by other units	3.0%	10.0%	8.0%	34.0%	45.0%
Functions of my work unit would be more effective if further decentralized	13.0%	16.0%	16.0%	28.0%	27.0%

Source: KPMG Online Survey, 2000

Five statements were presented regarding the FDOT's current organizational structure, reporting relationships and chain of command, span of control, duplicate or fragmented work activities, and decentralization.

Overall, a large majority of respondents were in agreement that the current organizational structure efficiently supports the Department's mission and vision, reporting relationship and chain of command in their respective work units are clearly defined, span of control and staff to manager/supervisor ratio is appropriate in their work unit, and that work activities in their work unit are not duplicated or fragmented. For the statements regarding further decentralization of work activities, 29 percent of respondents were in agreement that their work unit would be more efficient if functions were further decentralized.

Exhibit B-2: Survey Results – Policies, Procedures, and Practices

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Policies and procedures effectively support the Department's mission and objectives	16.0%	63.0%	14.0%	0.0%	7.0%
Policies and procedures are reviewed and updated on a regular basis	18.0%	61.0%	15.0%	0.0%	6.0%
Changes to policies and procedures are effectively communicated	12.0%	43.0%	27.0%	3.0%	15.0%
Policies and procedures are useful in performing functions/tasks of my work unit	18.0%	70.0%	8.0%	2.0%	2.0%
Policies and procedures are carried out uniformly throughout the Department	7.0%	33.0%	33.0%	10.0%	17.0%

Source: KPMG Online Survey, 2000

Five statements were presented regarding the usefulness of the FDOT's current policies, procedures and practices, how often they are being updated, how efficiently are they being communicated, and whether or not they are being applied uniformly throughout the state.

Overall, a large majority of respondents were in agreement that the current policies and procedures effectively support the Department's mission and objectives, and that these policies and procedures are updated on a regular basis. For the statement regarding whether or not the Department does a good job in effectively communicating these policies and procedures, 45 percent of respondents were either neutral or in disagreement with the statement. A large majority of respondents were in agreement that the current policies and procedures are helpful in performing their day-to-day operations. For the statement pertaining to policies and procedures being carried out uniformly throughout the Department, 60% of respondents were either neutral or in disagreement with the statement. These responses suggest that the Department would benefit by communicating the current policies and procedures more effectively and requiring all districts to apply them more uniformly.

Exhibit B-3: Survey Results – Performance Measures

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Indicators used for measuring performance support the Department's mission and objectives	9.0%	54.0%	17.0%	2.0%	18.0%
Performance measures are used consistently throughout the Department	8.0%	26.0%	33.0%	3.0%	30.0%
Indicators used for measuring performance of my work unit are relevant	15.0%	47.0%	20.0%	5.0%	13.0%
My work unit has appropriate tools and technology to meet its performance objectives	17.0%	61.0%	12.0%	1.0%	9.0%
My work unit receives appropriate training to meet performance objectives	26.0%	61.0%	7.0%	2.0%	4.0%

Source: KPMG Online Survey, 2000

Five statements were presented regarding FDOT's current performance measures, whether or not they are used consistently throughout the Department, whether or not they are relevant to functions/activities being performed, whether or not appropriate tools and technology is available to meet performance measures, and whether or not appropriate training is given to staff to achieve performance measures.

Approximately two thirds of respondents were in agreement that the current performance measures effectively support the Department's mission and objectives and that they are relevant. 34 percent of respondents indicated that the performance measures are used consistently throughout the Department. A large majority of respondents were in agreement that appropriate tools, technology and training were available to meet performance measures.

Exhibit B-4: Survey Results – Outsourcing

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My work unit has skills necessary to perform all required work activities	45.0%	41.0%	5.0%	0.0%	9.0%
My work unit has adequate staff to perform all required work activities	14.0%	49.0%	4.0%	4.0%	29.0%
Certain functions presently performed by my work unit would be more efficient if outsourced	5.0%	23.0%	18.0%	16.0%	38.0%
Qualified contractors are available to perform activities/functions of my work unit	5.0%	53.0%	23.0%	4.0%	15.0%
There are major impediments to outsourcing work activities of my work unit (labor unions, legislative, lack of skilled contractors, etc)	16.0%	22.0%	34.0%	3.0%	25.0%
Certain functions presently performed by vendors, consultants, and contractors will be more efficient if performed by my work unit.	7.0%	20.0%	36.0%	2.0%	35.0%

Source: KPMG Online Survey, 2000

Six statements were presented pertaining to outsourcing of FDOT functions, whether or not FDOT work units have adequate skills and staffing strength to perform required work activities, whether or not functions currently being performed by FDOT should be outsourced, whether or not enough qualified contractors are available to perform the required work activities, whether or not there are major impediments to outsourcing work activities, and whether or not FDOT should reduced the current level of outsourcing.

Eighty-six percent of respondents were in agreement that their respective work units have required skills to perform the required work activities. In terms of adequate staffing strength, 37 percent of respondents were either neutral or in disagreement with the statement that their work units have adequate staffing strength to carry out the required work activities. Twenty-eight percent of respondents indicated that work activities currently being performed by their respective work units would be more efficient if outsourced. Approximately one-third of respondents indicated that there are major impediments to outsourcing work activities of their respective work units. Twenty-seven percent of respondents indicated that functions/activities currently being performed by private vendors, consultants and contractors would be more efficient if performed by in-house staff.

C. REVENUE SOURCES & USES AND IMPACTS ON FUEL TAX REVENUES

The materials in this Appendix are intended to provide additional data and documentation for three topic areas addressed in Chapter 3 of the report.

- A comprehensive data table that addresses sources of STTF funds
- A detailed accounting of uses of funds constituting the FDOT Work Program
- A presentation of data to document the estimates of potential state fuel tax revenue losses

C.1. SOURCES OF FUNDS

Exhibit C-1 provides summary details of the revenues generated for the STTF and also includes details on the appropriation from the FHWA, FAA, and FTA grant programs and estimates of revenues from the local option fuel taxes. This material was produced by FDOT as part of a presentation titled Management Overview, dated July 31,2000.

C.2. USES OF FUNDS

Exhibit C-2 is the FDOT Work Program that was adopted in July 2000. Planned expenditures are categorized by; Product, Product Support, Operations and Maintenance, and Administration.

C.3. IMPACTS ON STATE FUEL TAX REVENUES

Estimates of the impacts on fuel consumption were derived from work conducted by the Office of Transportation Technologies (OTT) U.S. Department of Energy, “Quality Metrics.” Evaluations are conducted on an annual basis in the U.S. DOE Office of Energy Efficiency and Renewable Energy (EE/RE) to assess the energy and environmental benefits potential of EE/RE programs. The Quality Metrics methodology was applied to five “Planning Units” which reflect benefits in the form of reduced fuel consumption across the following applications.

- Technology Utilization, CNG, EPACT, and Clean Cities Fleet Mandates
- Fuels Development: Ethanol used in flexible-fuel vehicles, dedicated vehicles, and fuel cell vehicles; and as contained in blends and extenders
- Advanced Automotive Technologies (Light Vehicles and Class 1 and 2 Trucks):
  - Electric Battery Vehicle R&D, including Zero Emission Vehicle (ZEV) mandates
  - Fuel Cell R&D: Gasoline vehicles with 2.1 times conventional vehicle fuel economy
  - Hybrid Vehicle Engine R&D: Advanced diesel vehicle with 1.35 and 1.4 (depending on vehicle category) times conventional vehicle fuel economy.

- Heavy Vehicle Technologies Truck (Classes 3 – 8)
- Advanced Materials
  - Propulsion System Materials: Ceramics
  - Light Vehicle Materials for electric, hybrid, and fuel cell vehicles
  - Heavy Vehicle Materials

Years of introduction for the various technologies are indicated in Exhibit C-3. OTT updates the estimates provided in Exhibit C-3 and the forecasts of vehicle market penetration and energy savings on a yearly basis. This work forms the basis for a report to Congress on the progress being made to develop and promote advanced highway transportation vehicles, systems and alternative fuel use technologies that lead to reduce imported oil, lower regulated emissions and reduced creation of atmospheric gases that may add to the greenhouse effect.

The overall light vehicle sales penetration forecast is provided in Exhibit C-4. As the data in the exhibit show, the largest market penetration is achieved by vehicles using existing fuels (diesel and gasoline) the efficiency gains are achieved not by a radically different fuel source/motive power combination, but by adaptation of existing technology.

Exhibit C-5 illustrates market penetration forecasts for heavy vehicles. For the assumptions utilized, the natural gas truck characteristics are not economically competitive except for in the year 2000 in Class 7 and 8 trucks. Advanced diesel technology has the best penetration in Class 3 trucks, which have the greatest utilization level. Penetration in Class 2 trucks is also significant. Advanced diesel penetration in Class 3 trucks is limited for the hybrid vehicles.

Exhibit C-6 shows the oil that will be displaced as a result of the Office of Transportation Technologies programs. It can be seen that the total oil displacement that will occur in the year 2020 is almost 2 million barrels per day.

AEO 98 refers to the Annual Energy Outlook, which are a series of annual projections developed by the Energy Information Administration. Data is presented in millions of barrels per day. The percent reduction used to estimate state fuel tax losses were estimated beginning in 2004. The yearly values from 2004 to 2010 were estimated using a form of an “S” curve, which estimates increments to the percent reduction at a non-uniform rate. This accounts for time lags in the development and market acceptance of technology. From 2011 to 2020 it was assumed that reductions in fuel use would follow a uniform pattern of equal increments on a yearly basis.

Exhibit C-1: Florida's Transportation Tax/Fee Sources

FLORIDA'S TRANSPORTATION TAX/FEE SOURCES				
			ESTIMATED PROCEEDS ($ IN MILLIONS)*	
FUND/TAX SOURCE	**DESCRIPTION**	**RATES (CY 2000)**	**OTHER USES**	**TRANSPORTATION**
Federal			**FY 2000 DISTRIBUTIONS**	
Federal Highway Administration Highway Trust Fund (Highway Account)	Federal highway fuel taxes and other excise and heavy vehicle use and sales taxes of varying amounts	Gasoline . . . . . 15.44¢/gal Gasohol . . . . . .6.94¢/gal Diesel . . . . . 21.44¢/gal	None	1365
Federal Aviation Administration Airport & Airway Trust Fund	Federal Taxes on noncommercial aviation fuel, airline tickets, waybills, and international departures and arrivals	Avgas . . . . . 19.3¢/gal Jet Fuel . . . . . 21.8¢/gal Ticket tax . . 7.5% + $2.50 per Flight Segment Waybill tax . . .6.25% None	None	65
Federal Transit Administration Highway Trust Fund (Mass Transit Acct.) General Fund Federal Rail Administration General Fund	 Federal highway fuel taxes. Appropriations Appropriations	 All fuels . . . . . 2.86¢/gal N/A N/A	 None None	 201 2
State – For State Use			**FY 2000-01 DISTRUBTIONS**	
Fuel Tax (F.S. 206.41(1)(g)) (F.S. 206.87(1)(e)) (f.s..206.606) (F.S. 212.0501) (F.S.206.877) (F.S.2.206.87)	Highway fuels and (not including "alternative" fuels, such as LPG and CNG). Off-Highway Fuels Alternative Fuels such as LP andCNG	All fuels . . . . . 9.3¢/gal Diesel. . . . . .6% of fuel price Annual decal fee $177.10-$338.10* *Based on vehicle license category	DEP/FWCC . . . . . 9 Administration charge . . . . . .7 Agricultural emergency . . . . . 5 Miscellaneous credits & refunds (farmers & fisherman, transit systems, local government) . . . . . 26 Total 47	804

FLORIDA'S TRANSPORTATION TAX/FEE SOURCES				
			ESTIMATED PROCEEDS ($ IN MILLIONS)*	
FUND/TAX SOURCE	**DESCRIPTION**	**RATES (CY 2000)**	**OTHER USES**	**TRANSPORTATION**
		Out of state vehicles 25.4¢/gal		
State – For State Use (Cont'd)			**FY 2000-01 DISTRUBTIONS**	
SCETS Tax (F.S. 206.41(1)(f)) (F.S. 206.87(1)(d)) (F.S. 206.608)	Highway Fuels (included "alternative" fuels)	Gasoline . . . . . 2.6-5.1¢/gal Diesel . .. . .5.1¢/gal	G/R service charge . . . . . .34 Administration charge . . . . . 4 Agricultural emergency . . . . . 2 Miscellaneous credits and refunds (farmers & fisherman, transit system) . . . . . 5 Total 45	419
Aviation Fuel Tax (F.S. 206.9825) (F.S. 206.9845) (F.S. 206.9855)	Aviation fuel	All fuels. . . . . .6.9¢/gal	G/R service charge . . . . . .5 Administration charge . . . . . .1 Collection fees . . . . . . ** Airlines in-state wage refunds . . . . . 14 Total 20	56
Fuel Use Tax & Fee (F.S. 207.003, 207.004)	Identification decals, temporary permits, & taxes on highway fuels consumed by commercial interstate vehicles	Decals . . . . . $4/yr Fuels . . . . .Prevailing rates 10 day permit. $45	Administrative charge 2	15
Motor Vehicle License Fee (F.S. 320.0715, 320,0801) (F.S. 320.0804; F.S. 320.08056) (F.S. 320,08, 320.20) (F.S. 236.081,236.602) (Const., Art. XII, Sec. 9(d)(3)	Annual vehicle registrations	Based on vehicle weight	Education capital expenditures 104	407

FLORIDA'S TRANSPORTATION TAX/FEE SOURCES				
			ESTIMATED PROCEEDS ($ IN MILLIONS)*	
FUND/TAX SOURCE	DESCRIPTION	RATES (CY 2000)	OTHER USES	TRANSPORTATION
Initial Registration Fee (F.S. 320.072)	Initial registration surcharge on specified vehicles added to statewide stock	One-time $100	G/R service charge . . . . . 6 General Fund . . . . . 38 Total 44	83
Incremental Title Fee (F.S. 319.32)	Titles issued for newly registered and transferred vehicles, except for for-hire vehicles	Each $21		92
Rental Car Surcharge (F.S. 212.0606)	Daily surcharge on leased/rental vehicles for first 30 days.	$2.00/day	G/R service charge . . . . . 10 Administrative charge . . . ** Tourism Promotion Trust Fund . . . . . 21 Int. Trade Promotion Trust Fund . . . . . 6 Total 37	109

FLORIDA'S TRANSPORTATION TAX/FEE SOURCES				
			ESTIMATED PROCEEDS ($ IN MILLIONS)*	
FUND/TAX SOURCE	DESCRIPTION	RATES (CY 2000)	OTHER USES	TRANSPORTATION
State – For Local Use				
Fuel Excise Taxes (Constitutional, County & Municipal Fuel Taxes and Fuel Use Tax) (F.S. 206.41(1)(a)(b)(c)) (F.S.206.60, F.S.206.605) (F.S. 206,87(1)(a), 207.003)	All highway fuels.	Constitutional . . . . . .2¢/gal County. . . . . .1¢/gal Municipal. . . . . .1¢/gal	G/R service charge . . . . .13 Collection fees . . . . . 3 Refunds (farmers & fisherman, local government entities) . . . . . 1 Administrative charges . . 2 Total 19	347
Local				
Ninth-cent Fuel Tax (F.S. 206.41(1)(d)) (F.S. 206.87(1)(b), 336.021)	All highway fuels, gasoline tax levied by county's governing body	Gasoline . . . . . 0-1¢/gal Diesel . . . . . .1¢/gal	Administrative charge . . . 1 Collection fees. . . . . .1 Total 2	64
Local Option Fuel Tax (F.S. 206.41(1)(e)) (F.S. 206.87(1)c, 336.025)	All highway fuels, tax determined by county governing body	Gasoline . . . . . 3-11¢/gal Diesel . . . . . .6¢/gal	G/R service charge . . . . . 50 Administrative charge . . . . 7 Collection fees . . . . . 6 Refunds (farmers & Fisherman, transit systems) . . . . . 2 Total 65	623 *Revenue estimates are subject to change throughout the fiscal year. ** Less than $0.5 mil.

Source: Transportation Revenue Estimating Conference results, October 17,2000

Exhibit C-2: Program and Resource Plan Summary (FY 2000-2008)

1ADOPT4	FLORIDA DEPARTMENT OF TRANSPORTATION 2000 PROGRAM AND REOSURCE PLAN SUMMARY FISCAL YEARS 2000/01 TO 2008/09 (MILLIONS OF $)												OMB 27 JULY 2000 10:30AM	
ADOPTED WORK PROGRAM TAPE OF 1 JULY 2000 01ADOPT4 PROGRAM AREAS	ACTUAL 98/99	PLAN 99/00	00/01	'01/02	02/03	03/04	04/05	5 YR. TOTAL	05/06	06/07	07/08	08/09	4 YR. TOTAL	10 YR. TOTAL
I. PRODUCT	2262.3	2477.0	4714.9	3268.8	2785.2	3039.2	2755.9	16564.0	2595.0	2740.0	2672.1	2873.0	10880.2	29921.2
A. Intrastate Highways	555.0	612.6	723.8	928.6	732.8	966.0	770.6	4121.9	560.4	721.2	545.2	592.0	2418.7	7153.3
B . Other Arterials	395.0	452.6	717.5	547.5	540.7	467.9	454.9	2728.5	501.5	521.3	530.8	548.8	2102.4	5283.4
C . Right Of Way	274.7	354.0	1345.5	431.4	219.6	444.8	265.2	2706.6	429.8	351.2	367.9	326.4	1475.3	4535.8
D . Aviation	98.1	113.0	126.6	85.1	83.7	83.8	86.6	465.8	100.1	104.0	108.0	112.2	424.3	1003.1
E . Transit	102.5	120.9	167.4	126.9	134.8	139.9	124.0	693.1	160.7	166.5	172.5	178.7	678.5	1492.5
F . Rail	29.1	29.6	79.4	36.6	40.0	44.9	57.7	258.6	62.9	65.1	67.5	69.9	265.5	553.7
G . Intermodal Access	39.9	90.2	397.8	399.0	324.0	191.5	210.9	1523.2	143.5	146.8	150.2	153.7	594.2	2207.6
H . Seaports	24.6	35.0	38.7	35.0	35.0	35.0	35.0	178.7	36.3	37.7	39.1	40.6	153.7	367.4
1 . Safety	69.2	39.9	73.4	51.8	59.1	50.1	58.1	292.5	50.9	51.9	52.9	53.9	209.6	542.0
J . Resurfacing	362.2	369.1	614.0	395.4	473.0	461.0	532.4	2475.8	459.2	466.2	491.5	496.8	1913.7	4758.5
K . Bridge	312.0	260.1	430.7	231.5	142.5	154.2	160.5	1119.4	89.6	108.1	146.5	300.1	644.3	2023.8
II. PRODUCT SUPPORT	786.9	885.1	1443.6	896.9	889.8	883.4	851.8	4965.6	769.3	802.3	843.5	830.3	3245.4	9096.1
A. Preliminary Eng.	345.8	399.2	575.5	356.8	428.6	362.1	373.8	2096.8	314.4	331.0	370.7	323.9	1340.1	3836.1
B. Const.Eng.Inspect.	244.9	235.4	374.6	304.0	247.1	313.8	273.6	1513.1	248.7	262.9	272.6	297.2	1081.4	2829.9
C. R/W Support	94.9	100.4	317.0	111.4	82.0	72.9	78.1	661.4	70.0	61.2	56.7	60.4	248.2	1010.0
D. Environmental Mitigation	1.8	39.1	36.1	10.0	14.4	14.2	3.1	77.9	5.5	11.7	3.2	3.3	23.6	140.6
E. Material & Research	39.0	41.7	53.5	45.8	47.3	49.0	50.6	246.2	51.0	52.8	54.8	56.8	215.4	503.3
F. Planning	49.1	59.6	75.7	58.0	59.1	59.7	60.4	312.8	67.1	69.4	71.9	74.4	282.8	655.2
G. Public Transport. Ops.	11.3	9.8	11.3	10.9	11.3	11.7	12.2	57.3	12.7	13.2	13.7	14.3	53.9	121.0

Exhibit C-2: Program and Resource Plan Summary (FY 2000-2008)

Program Areas	ACTUAL 98/99	PLAN 99/00	00/01	'01/02	02/03	03/04	04/05	5 YR. TOTAL	05/06	06/07	07/08	08/09	4 YR. TOTAL	10 YR. TOTAL
III. OPERAT.& MAINT.	504.5	536.0	645.4	570.2	610.7	632.4	690.7	3149.3	760.2	680.9	705.3	729.0	2875.4	6560.7
A. Routine Maintenance	338.4	358.2	437.8	388.3	417.1	428.7	472.8	2144.6	450.7	466.2	482.2	498.8	1897.8	4400.6
B. Traffic Engineering	14.4	20.7	32.8	25.5	28.5	35.1	35.2	157.1	33.9	35.2	36.5	36.3	141.9	319.7
C. poll Operations	129.0	135.1	149.5	131.5	139.3	141.8	154.7	716.9	246.6	149.3	155.2	161.3	712.3	1564.3
D. Motor Carrier Comp.	22.7	21.9	25.3	24.8	25.8	26.9	27.9	130.8	29.1	30.2	31.4	32.7	123.4	276.0
IV. ADMINISTRATION	145.0	123.1	146.4	128.5	145.9	155.4	136.1	712.2	141.3	146.9	152.8	158.7	599.7	1435.0
A. Administration	96.2	99.5	95.5	100.7	104.7	108.9	113.3	523.1	117.6	122.3	127.2	132.2	499.3	1121.8
B. Fixed Capital	48.7	23.6	50.9	27.8	41.2	46.5	22.8	189.1	23.7	24.6	25.6	26.5	100.4	313.1
TOTAL PROGRAM	3698.6	4021.2	6950.3	4864.3	4431.6	4710.4	4434.4	25391.1	4265.8	4370.0	4373.7	4591.0	17600.6	47012.9
V. OTHER	76.0	76.6	161.3	152.4	181.8	122.3	190.1	808.0	184.5	186.9	188.0	188.4	747.9	1632.5
A. Local Govt. Reimb.	4.2	16.3	33.9	14.4	30.3	4.8	10.0	93.4	0.0	0.0	0.0	0.0	0.0	109.7
B. Off. Information Systems	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C. Other	72.8	60.4	127.4	138.0	151.5	117.5	180.1	714.5	184.5	186.9	188.0	188.4	747.9	1522.8
TOTAL BUDGET	3774.6	4097.9	7111.6	5016.7	4613.5	4832.7	4624.6	26199.1	4450.4	4557.0	4561.7	4779.4	18348.4	48645.4
HIGHLIGHTS:														
1. Construction	2675.5	1688.0	2392.0	1992.3	1784.1	2058.7	1934.2	10162.5	1597.7	1779.4	1675.2	1897.5	6949.9	18800.3
2. PTO (w/o TD Comm.)	268.6	363.6	784.6	658.4	592.0	469.0	513.9	3017.9	474.5	489.9	506.0	522.6	1992.9	5374.5
3. Prod.Supp.Consult.	443.7	477.2	821.2	499.1	499.6	494.3	460.2	2774.4	364.9	388.1	430.2	398.0	1581.2	4832.8
a. Preliminary Eng.	255.2	304.7	481.5	258.4	255.6	255.6	263.0	1584.7	199.3	211.3	246.2	194.4	851.1	2740.6
b. Cst.Eng.Inspect.	175.3	163.8	302.4	227.6	231.2	231.2	187.7	1116.6	159.3	170.0	175.9	196.7	701.9	1982.3
c. R/W Support	13.2	8.7	37.4	13.1	5.7	7.5	9.5	73.1	6.3	6.8	8.1	6.9	28.2	110.0

Source: FDOT Finance and Administration

Exhibit C-3: Technology Introduction Assumption

Technology	Small Car	Large Car	Minivan	Sport Utility	Pickup Truck/ Large Van
Advanced Diesel	2003	2005	2004	2004	2002
Direct-Injection Gasoline	2004	2004	2004	2004	2004
CNG	-	2000	2002	2002	2000
Electric	2003	-	2004	2004	-
Hybrid	2006	2003	2011	2011	-
Fuel Cell	-	2007	2013	2012	-

Source: U.S. DOE Office of Transportation Technologies, "Quality Metrics"

Exhibit C-4: Market Penetration of Alternative Light Vehicles in Sales and Stocks

Technology	Year 2000		Year 2010		Year 2020	
	Sales, %	Stocks,%	Sales, %	Stocks,%	Sales, %	Stocks,%
Advanced Diesel	0.0	0.0	19.5	8.5	20.3	17.7
Direct-Injection Gasoline	0.0	0.0	20.2	6.6	18.1	16.9
Alcohol Flex	3.3	0.4	4.6	3.8	4.1	4.0
CNG	0.1	0.0	2.0	1.3	1.6	1.7
Hybrid	0.0	0.0	11.7	3.7	14.0	11.5
Electric	0.0	0.0	2.5	0.8	1.8	1.9
Fuel Cell	0.0	0.0	2.2	0.4	6.0	3.9
Total	3.4	0.4	62.7	25.1	65.9	57.6

Source: U.S. DOE Office of Transportation Technologies, "Quality Metrics"

Exhibit C-5: Heavy Vehicle Market Penetration Results

Technology	2000	2005	2010	2020
Class 3-6 Hybrid	0.0%	0.5%	2.0%	2.6%
Class 3-6 Natural Gas	0.0%	0.0%	0.0%	0.0%
Class 7&8 Type 1 Adv. Diesel	2.6%	4.0%	5.6%	12.0%
Class 7&8 Type 1 Natural Gas	0.2%	0.0%	0.0%	0.0%
Class 7&8 Type 2 Adv. Diesel	4.6%	7.0%	10.4%	23.7%
Class 7&8 Type 2 Natural Gas	0.3%	0.0%	0.0%	0.0%
Class 7&8 Type 3 Adv. Diesel	4.3%	6.6%	10.1%	23.8%
Class 7&8 Type 3 Natural Gas	0.1%	0.0%	0.0%	0.0%

Source: U.S. DOE Office of Transportation Technologies, "Quality Metrics"

Exhibit C-6: Petroleum Displaced

Technology	Primary Oil Displaced MBPD		
	Year 2000	Year 2010	Year 2020
Technology Deployment	0.031	0.196	0.208
Biofuels	0.000	0.170	0.473
Flex-Fuel	0.000	0.010	0.033
Dedicated	0.000	0.000	0.000
Fuel Cell	0.000	0.000	0.000
Blends & Extenders	0.000	0.160	0.440
Total Advanced Auto Tech	0.001	0.371	0.867
Electric Vehicle R&D	0.001	0.074	0.126
Fuel Cell Vehicle R&D	0.000	0.013	0.116
Hybrid Vehicle R&D	0.000	0.128	0.336
SDI	0.000	0.052	0.108
Light Duty Engine R&D	0.000	0.104	0.181
Heavy Vehicle R&D	0.004	0.097	0.0187
Classes 1&2	0.000	0.058	0.099
Classes 3-8	0.004	0.039	0.088
Advanced Materials	0.000	0.012	0.035
Propulsion System	0.000	0.000	0.000
Light Vehicle	0.000	0.012	0.035
Electric Vehicle	0.000	0.007	0.012
Hybrid Vehicle	0.000	0.004	0.010
Fuel Cell Vehicle	0.000	0.001	0.013
Heavy Vehicle	0.000	0.000	0.000
Total	0.036	0.0846	1.770
Baseline (AEO 98)	12.390	14.760	16.130
Percent Reduction	0.3%	5.7%	11.0%

Source: U.S. DOE Office of Transportation Technologies, "Quality Metrics"

D. ALTERNATIVE CONTRACTING METHODS

Traditionally, construction contracts include provisions for liquidated damages in the event that a project is delayed. There are several alternative contracting methods that provide contractors with incentives to finish projects in a timely manner. State departments of transportation (DOT) are utilizing these methods with increasing frequency. The common premise with these alternative contract methods is that contractors are less likely to file construction claims when they finish projects on schedule. Each of these methods recognizes a cost to the public for the inconvenience of a transportation facility that is either out of service or functioning at a reduced capacity. This is referred to as the Daily Road User Cost (DRUC).

D.1 INCENTIVE/DISINCENTIVE (I/D) CONTRACTS

This method provides for additional payment to the contractor for each unit of time that the contractor completes the project ahead of the DOT's fixed date, as well as additional cost to the contractor for each unit of time that the project is completed beyond the DOT's fixed date. The I/D concept is best suited to projects and tasks where the Department has limited its risks for delay claims.

D.2 COST PLUS TIME CONTRACTS (A+B)

With this method, the DOT furnishes the DRUC and each contractor determines the number of days it requires to complete the project. Each contractor computes its bid by multiplying the number of days by the DRUC and adding the result to the construction cost. These contracts are awarded based on the combination of the bid for the contract pay items and the associated costs of the time needed to complete the work according to the formula: A + B = Total Bid; where A = Standard Bid (Cost) and B = Time Bid (number of days times DRUC). The contractor with the lowest sum of A+B is awarded the contract.

D.3 LANE RENTAL CONTRACTS

With this method, the DOT defines a fee schedule for lane closures for various times of day and days of the week, based on traffic studies. Bidders submit their cost to perform the work, in addition to the estimated time required for lane closures, during each rental fee period. The DOT determines the low bidder by adding its estimated total lane rental cost to each bid submitted. The successful contractor pays the DOT for lane closures in accordance with the predetermined rental fee schedule. The contractor receives any remaining lane rental funds at the end of the project, and the Department receives credits for lane rental costs that exceed the budget. This method encourages the contractor to minimize the road-user impacts during construction.

D.4 NO EXCUSE BONUSES

With this method, an incentive is placed on a specific contractual milestone holding the contractor to completion within a predetermined time period without extensions being granted for unforeseen conditions, weather delays, and any other such issues that commonly arise.

Two acceptable time periods for this type of contract are the bonus date and the normal contract completion date. Time extensions are generally granted for hurricanes or other catastrophic events that might occur.

D.5 LIQUIDATED SAVINGS

This method awards a financial incentive to the contractor for each calendar day the project is completed and accepted prior to the completion date. The financial amount is based on the Department's direct savings in relation to construction engineering inspection (CEI) and contract administration costs, not to exceed $10,000 unless otherwise approved by the Department. The difference between this method and No Excuse Bonuses is time periods can be adjusted for unforeseen conditions, weather delays, and any other such issues that commonly arise.

D.6 WARRANTY CLAUSES

This method places all responsibility for repair and/or replacement of defective materials on the contractor and/or supplier/manufacturer. Common warranty times may last for up to one year following the completion of a project. The contract will be voided unless the warrantor follows through with the negotiated terms of the warranted product and workmanship. This type of contract encourages the contractors to look at life cycle costs as opposed to only initial costs.

D.7 LUMP SUM

This method requires the contractor to submit to the Department a lump sum price to complete a project as opposed to bidding on individual pay items with quantities provided. The lump sum method reduces the contract administration costs, as under this method, typically there is no need for quantity verification and measurement. Negotiations can occur if unforeseen conditions or other changes arise during the contract period that warrants a change in quantities.

D.8 DESIGN-BUILD (MAJOR)

The Design-Build concept provides flexibility for innovation by combining the design and construction phases of a particular project to a Design-Build firm. This method is limited to major bridges, rail corridor, and building projects. Major bridges are defined as any bridge with an estimated cost of construction phase exceeding $10 million.

D.9 DESIGN-BUILD (MINOR)

This method is similar to the Design-Build (major) described above – it combines both the design and construction phases of a particular project to a Design-Build firm and is defined as bridges under $10 million and other transportation projects not previously allowed under Florida Statutes, Section 337.11(7). Design-Build proposals are evaluated based on design quality, timeliness, management capability, and environmental sensitivity.

D.10 BID AVERAGING METHOD (BAM)

With this method, competitive bidding techniques are practiced as opposed to the past traditional low bid process. It is designed for a contractor to bid a true and reasonable cost “up front”, which should minimize both claims and cost overruns. This method is best used where competition is ample in the particular project area and where a low bid is anticipated to be a significant problem. Presently, the Federal Highway Administration (FHWA) does not allow the use of this method for projects funded by federal funds.

E. ITS GRANTS BY U.S. DOT

On November 2, 2000 the U.S. Transportation Secretary announced that 92 projects totaling $93.9 million in 41 states and the District of Columbia would be receiving funds under the Intelligent Transportation Systems (ITS) program.

The ITS program was first authorized in the Intermodal Surface Transportation Efficiency Act of 1991 and was again reauthorized in 1998 under the Transportation Efficiency Act for the 21st Century (TEA-21). Under TEA-21, ITS places requirements on projects to conform to standards regulated by the National ITS Architecture.

The ITS program was designed to improve operational processes and increase safety at ports, highway-rail intersections, and other intermodal freight facilities. ITS implements the latest computer technology and other communication tools in order to increase the performance of the nation's infrastructure system.

Exhibit E-1: Fiscal Year 2001 Intelligent Transportation Systems Program Grants

State	Amount	Rank
Pennsylvania	$6,879,901	1
Michigan	$6,164,073	2
Alabama	$5,567,550	3
Minnesota	$5,169,868	4
Colorado	$4,971,027	5
Virginia	$4,374,504	6
Texas	$4,175,663	7
California	$3,439,951	8
Washington	$3,062,153	9
New Jersey	$2,982,616	10
Missouri	$2,584,934	11
Connecticut	$2,386,093	12
Maryland	$2,386,093	12
Iowa	$2,187,252	14
Nebraska	$2,067,947	15
Utah	$1,988,411	16
Alaska	$1,869,106	17
Illinois	$1,869,106	17
Tennessee	$1,869,106	17
Arizona	$1,789,570	20
Delaware	$1,789,570	20
North Carolina	$1,690,149	22
Louisiana	$1,590,729	23
Nevada	$1,590,729	23
New York	$1,590,729	23
Ohio	$1,590,729	23
South Carolina	$1,590,729	23
Vermont	$1,590,729	23
Mississippi	$1,312,351	29
Florida	**$1,193,046**	**30**
Kentucky	$1,193,046	30
North Dakota	$1,193,046	30
Montana	$1,093,626	33
District of Columbia	$994,205	34
New Mexico	$994,205	34
South Dakota	$994,205	34
Indiana	$795,364	37
Oklahoma	$795,364	37
Wisconsin	$795,364	37
Idaho	$695,944	40
Oregon	$596,523	41
Rhodes Island	$397,682	42

Source: U.S. Department of Transportation

F. FDOT'S RESPONSE TO TRANSFERING THE F. MOTOR CARRIER COMPLIANCE OFFICE

Commercial Vehicle Law Enforcement in Florida; Should The Motor Carrier Compliance Office Stay Housed Within The Department Of Transportation?

Approximately twenty years ago, the Florida Legislature made the decision to create the Motor Carrier Compliance Office (MCCO) within the Florida Department of Transportation (FDOT). The birth of this new law enforcement agency was facilitated by the removal of weight enforcement efforts from the Division of the Florida Highway Patrol (FHP), within the Department of Highway Safety and Motor Vehicles (DHSMV), and the commercial vehicle safety and traffic enforcement program from the Public Service Commission and merging them into one agency responsible for enforcing state and federal laws pertaining to the operations of commercial motor vehicles (CMV).

During the last several years, the Florida MCCO has found a home at FDOT and is fast becoming a nationally known CMV enforcement agency that utilizes state of the art technology and a highly trained core of professional law enforcement officers and inspectors to carry out its mission. Nonetheless, during this time it has been occasionally suggested that the MCCO would be better served if located with the DHSMV and specially the FHP. The following is a discussion of several issues that should be considered prior to making any such move.

Law Enforcement Operations

Upon initial review, it may appear that the DHSMV/FHP and the MCCO have very similar missions and responsibilities. An in-depth evaluation however, reveals some similarities related to general law enforcement issues, however many differences as they related to CMV issues.

First, a review of the key responsibilities section of the KMPG FDOT Study indicates that DHSMV enforces traffic laws and conducts vehicle safety inspections. The fact is that FHP Troopers only patrol approximately 30% of their time due to their traffic crash investigation duties as well as other related non-enforcement activities. This percentage in not within the control of DHSMV management and it can be problematic trying to ensure that resources dedicated to preserving the transportation infrastructure will not be relegated to other duties.

The Florida Highway Patrol's primary responsibility, the investigation of traffic crashes consumes most of the work time for each trooper. As the number of troopers has remained virtually constant and the number of motorists has increased, proactive traffic enforcement has declined due to the increasing number of traffic crash investigations. In many FHP districts, Troopers run from call to call, sometimes having no time for breaks, meals, or any type of proactive police actions. Basically, un-obligated patrol time for

today's Trooper in minimal. MCCO Officers have a very high ratio of un-obligated patrol time in comparison to other law enforcement agencies. This allows MCCO officers to proactively enforce laws pertaining to commercial motor vehicle weight and safety. If the MCCO is transferred to the FHP it would be difficult to ensure that the duties currently performed by MCCO would receive the same level of attention due to the need to dispatch personnel to traffic crashes. Although FHP would have good intentions, their shortage of manpower to respond to vehicle crashes could force MCCO officers to assume FHP duties and spend less time concentrating on CMV enforcement related activities.

This table also indicated that DHSMV conducts vehicle safety inspections. Safety inspections conducted by Troopers are very brief and not in-depth. It is common knowledge that they are not conducted on CMVs due to the time involved and lack of training in this area. These inspections check lights, tires, and other readily apparent problems with passenger cars. MCCO officers, on the other hand, receive in excess of 100 hours of training and are certified by the Commercial Vehicle Safety Alliance (CVSA). This certification allows for our officers to conduct nationally recognized level 1, 2, and 3 inspections on CMVs and affix the CVSA safety decal, which is honored nationwide. This prevents vehicles that have been deemed to be safe from being repeatedly inspected by other officers, thereby not posing an unreasonable burden to the trucking industry and the taxpayer. While FHP troopers may issue a traffic citation with minimal penalties, MCCO officers solely issue safety citations and load reports for violation of state and federal law where the penalties are paid to the State Transportation Trust Fund. In addition, MCCO is the only agency in the State of Florida authorized to enforce Code of Federal Regulations Part 49.

KPGM's draft study indicates HSMV enforces laws regulating over dimension and taxing. Although DHSMV does issue tags and fuel permits, we are unaware of any training received by FHP personnel that pertains to either over dimension vehicles or tax class violations. Also, DHSMV/FHP personnel are not trained, nor authorized to cite violations for improper logbooks or hour of service violations. It is common knowledge that Troopers rarely conduct any enforcement activities on CMVs.

The only task listed in the table actually performed by DHSMV, is the registration of commercial vehicles. The registration function merely consists of data input and the collection of revenue and does not have a regulatory or enforcement mission. The registration of the required Federal DOT numbers is performed by MCCO. This registration service does not have an impact on the duties of MCCO since registrations information is readily available via FCIC and other computer systems. Although the co-location of these services is not necessary, it is interesting to note that management of the DHSMV has advocated moving such tag and fuel registrations functions to the MCCO.

Training Issues

MCCO officers received special training unique to commercial vehicle enforcement. In addition to basic law enforcement certification, our officers are certified by the

Commercial Vehicle Safety Alliance (CVSA), and are also certified in Hazardous Materials, Cargo Tank, and Bulk Transport. MCCO officers are also becoming certified as CMV "Post Crash Inspectors" to conduct in-depth investigations of CMVs involved in fatal crashes, that ironically were not being done by state highway patrol agencies do to lack of manpower, lack of training, and work load problems. The federal government (USDOT) recognized this fact and began training and funding DOT type enforcement agencies to conduct such inspections.

The FHP does not have the manpower or free time to train Troopers in these areas of expertise, nor would they have the time to conduct enough inspections and attend the classes to maintain such certifications. If MCCO were to be transferred to another department, one would have to question whether such training and enforcement activities would stay a priority.

Funding and Customer Focus Issues

Currently, the MCCO is funded from the State Transportation Trust Fund and the United States Department of Transportation's Motor Carrier Assistance Program (MCSAP), while the FHP is funded through general revenue dollars. Much of the federal funding is contingent upon certain levels of specified safety enforcement activities that fall outside the routine operations of the FHP/DHSMV. In addition, if certain levels of weight enforcement are not reached, federal highway dollars paid to the State Transportation Trust Fund could be at risk. Such funds are used to build and maintain Florida's highway infrastructure.

During FY 99/00, MCCO collected over $11.5 million in penalties, which was deposited into the State Transportation Trust Fund (STTF). A merger, with a shift in priorities to match those of FHP could result in a loss of revenue to the STTF if the unobligated patrol time used for proactive enforcement is reduced to the level currently experienced by FHP.

The transfer of MCCO to DHSMV/FHP could create a need for additional general revenue funding. Additionally, a decrease in weight and safety enforcement resulting from the former MCCO personnel conducting crash investigations would result in a loss of revenue to the State Transportation Trust Fund.

Florida statutes provide that the Department of Transportation has jurisdiction over, and responsibility for, the state highway system. Preservation of the highway and bridge infrastructure is a vital part of FDOT's mission and not the FHP. The MCCO's enforcement efforts as they relate to safety, traffic, weight/size and other priorities directly support the department's goal of maintaining a safe and efficient highway system. For an example, weight and size enforcement directly impacts the roadway infrastructure. Preventing damage before it happens saves money and protects citizens operating vehicles, and enforcement actions taken on violators helps, in some way, to provide replacement funding for highway repairs.

It is clear that the FDOT is MCCO's primary governmental customer. Routinely, MCCO officials deal with other components of the department such as CMV permits specialists, engineers, maintenance officials, transportations planners, and well as fiscal strategists. Much of the decision-making process involving enforcement is based on communications between these areas. The MCCO's weigh facilities could not operate without the constant assistance and cooperation from in-house maintenance crews and engineering professionals, and experts in bridges and roads help MCCO know how to properly enforce certain requirements that keep bridges and bypasses from collapsing under the stress of overweight vehicles.

Liaisons between these entities are vital for the success of the MCCO and the absence of good cooperation and communication could not only cost money but jeopardize lives. If the MCCO were moved outside the FDOT, this support would not be present or guaranteed.

Other States Assignments of CMV Enforcement Duties

KPGM's revised chart showing commercial vehicle enforcement in other states appears to be an accurate reflection of states listing such enforcement areas under DOT organizations. The fact that so many states are assigning weight and safety enforcement to DOTs or other agencies, other that state patrols, is suggestive that there are many positives to this configuration.

In Florida, MCCO does all CMV enforcement including weight and safety. According to records from the USDOT Federal Motor Carrier Safety Administration and the Federal Highway Administration, fourteen (14) states have DOT/Highway Departments enforcing safety regulations on CMVs including Arkansas, Florida, Hawaii, Illinois, Iowa, Kentucky, Maryland, Mississippi, New York, North Carolina, Oregon, Pennsylvania, Utah, and Wisconsin.

Approximately Twenty-five (25) states have weight enforcement assigned to DOTs or other non-highway patrol entities. Of these, ten (10) states have DOT agencies enforcing weight laws, which include, Arizona, Connecticut, Florida, Georgia, Hawaii, Idaho, Iowa, Kentucky, New Mexico, and Mississippi.

Executive Considerations

It is true that FHP and MCCO law enforcement officers are vested with the authority to make arrests and enforce traffic laws pursuit to F.S. 316.640 (1)(a) as well as enforcing other related statutes. However, making the argument that because both agencies employ sworn officers, with similar duties, they should necessarily be house together, flies in the face of the constitutional structure of our state. Executive authority, so clearing manifested by law enforcement and regulatory powers, is distributed throughout the State Cabinet. Most cabinet members have divisions or bureaus that employ enforcement personnel who specialize in areas that are important to their respective offices.

With the FDOT being a Governor's agency, the Governor has direct control over the activities of MCCO. The Governor and the Secretary of FDOT have the ability to place managers and instill a philosophy that is directly related to the administration's agenda. An example is the current focus of MCCO on the facilitation of economic development and safe communities. MCCO is instituting programs to ensure cargo moves quickly, efficiently, and safely through Florida. MCCO has developed ways to support this vision to include, construction of weigh-in-motion facilities, special permitting, highway death reduction programs such as post crash inspection, and an increased emphasis on the prevention of truck/cargo theft and drug trafficking. Such issues may be difficult to address if MCCO was transferred to a cabinet department that currently has seven (7) policy makers.

Both MCCO and FHP are quality law enforcement organizations with missions that are vital to the safety of Florida's citizens and visitors. Since MCCO came into existence in 1980, it has provided a vital service to the Department of Transportation and the citizens of Florida. This formula works better and more efficiently that it has during the past.

Unless one advocates the creation of a "super police agency" that does all law enforcement work, there is no compelling reason not to allow special law enforcement services to remain within agencies that have special needs in order to provide the best service and remain closest to its customers and working partners. Furthermore, Florida has approached the concept of merging all law enforcement agencies into one "super state police" agency, and this issue has been defeated. In fact, Governor Bush, in a recent letter to agency heads directing state law enforcement agencies to share resources and work better together, made it clear that he had no intentions of moving individual law enforcement agencies to other departments. It is our firm belief as well, that any such plan to move MCCO to the DHSMV would be met with fierce objections from the Florida Sheriff's Association who has long been opposed to adding any additional powers or responsibilities to the FHP/DHSMV.

Hidden Costs

During a merger or relocation of a state agency, especially a law enformcnet agency, there are many costs. When you take into consideration that the entire agency must be housed, equipped, furnished in new surroundings, one must contemplate what costs are not readily realized. Full analysis of such a move would take some time, however it is clear that it would cost millions of dollars to accomplish a transfer. A good rule of thumb is to take at least one full year's operating budget to spend on just the physical move. Other costs such as retrofitting or redesigning police vehicles, uniforms, badges, structures, and other readily identifiable items can be hard to estimate. With the identity of such equipment clearly being a part of the FDOT, it would need to be changed to the new department. If not, why make the move?

Legislative Review

In June of 1999, the Florida Legislature's Office of Program Policy Analysis and Government Accountability (OPPAGA) issued their justification review document that commented specifically on the placement, benefit, and performance of the MCCO program. The report stated in part, "the MCCO weight and safety enforcement activities are beneficial to the state…most of the state's road wear is due to heavy trucks…state CMV safety enforcement helps reduce vehicles accidents through roadside inspections and highway enforcement activities which increase the likelihood that safety defects, drivers deficiencies, and unsafe practices will be detected….the FDOT should continue to administer the MCCO program…there are no compelling benefits to transferring the program to another agency."

A perspective from the DHSMV

Recently we discussed this proposition with Fred Dickinson, Executive Director of the DHSMV. Dickinson firmly opposes the moving of MCCO from the FDOT to his department and feels that there will be benefit to the taxpayer realized in such a move. He also feels that the FDOT is the best department to house the MCCO.

Dickinson agrees that some of the study's analysis is flawed. Specifically, although some of the duties of MCCO officers and state troopers are similar, the overall mission and practical operations is different. FHP does work traffic, but spends most of the time working passenger cars and not CMVs. When reviewing KPMG's chart (exhibit 7-7) he disputes one of the important comparisons. In fact, FHP/DHSMV is not conducting "vehicle safety inspections" as noted in box #4 and in fact one could questions whether they are practically doing any of the activities listed in box #2,3,and 5, as they relate to CMVs. This information was also supplied by the Deputy Director of the FHP who said such enforcement is minimal or non-existent.

Dickinson disputes the study's explanation of cost savings to the state. In fact the map used in the study reflects many station sites that have been closed. He further agreed that due to overcrowding in offices that remain, there is no room to bring in MCCO. Any such increase in manpower would require new buildings or additional office space being obtained. Furthermore, the hidden cost to transfer MCCO over would be astronomical considering cars would have be re-designed and repainted, new uniforms designed and purchased, and many other technical issues such as radio equipment.

Since the FHP pays their officers and supervisors at a rate higher than MCCO, it would be a dramatic increase for his department or other funding source, if such merger were approved.

Dickinson also suggested that cost savings that might be made are already being addressed in areas such as joint dispatch, training, and aircraft usage in the Governor's Joint Law Enforcement Services Enterprise Project that is currently ongoing. In this program MCCO, FHP, and FDLE are already sharing resources at a savings, and have the added benefit of a closer working relationship.

Answering the question

A complete review of the history of the MCCO and recent accomplishments made while this agency has been a part of the FDOT shows that commercial vehicle enforcement is alive and well in Florida and is properly housed at FDOT.

It is clear that the mission of the FDOT has been compatible with the interests of the MCCO and great improvements have been over the last few years. Although some disparity in pay still exists between MCCO officers and other agencies, the FDOT administration has provided sound leadership and adequate funding to carry on with this program. The department is also supporting many new initiatives designed to further professionalism the agency and better equip its officers.

The more pressing question about how to support and improve CMV enforcement in Florida should be the consideration by the FDOT, the Transportation Commission, and the Governor, to address issues on additional sworn officers need for patrol activities and better pay and benefits to retain these highly skilled and training officers. Florida ranks 3rd highest in the nation in deaths caused by or related to, CMV crashes. The MCCO is woefully understaffed, and currently needs additional sworn officers. In comparing Florida with California, the most similar state in trucking traffic and issues, we find that their CMV enforcement unit has approximately nineteen-hundred sworn (1900) officers as opposed to Florida's two hundred-twenty three (223). Even North Carolina has over 400 CMV officers in their DOT. We have also seen the loss of good officers to local agencies who can pay better wages and provides better retirement and insurance benefits.

For the future of CMV law enforcement, the survival of our transportation industry, and the safety of our citizens, we feel that the MCCO should remain a part of the FDOT and

assist the department in ensuring the “mobility of people and goods, enhancement of economic prosperity, and preservation of our quality of life.” We also feel that manpower need to be studied and addressed, as well as pay in line with the specialized training required to be a MCCO officer.

TF
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State of Florida
DEPARTMENT OF
HIGHWAY SAFETY AND MOTOR VEHICLES

FRED O. DICKINSON
Executive Director

December 5, 2000

Secretary Thomas F. Barry
Department of Transportation
605 Suwannee Street
Tallahassee, FL 32399-0450

Dear Secretary Barry:

Thank you for the opportunity to review and comment on the report of KPMG Consulting regarding the draft recommendation to transfer the Office of Motor Carrier Compliance from FDOT to the Department of Highway Safety and Motor Vehicles. As I indicated to Colonel Graham Fountain on Friday, December 1, this issue is not a part of the department's legislative agenda for the 2001 Legislative Session.

The consultant's draft report seems to center around the commonality of commercial motor vehicle resting under the purview of state police/highway patrol organizations and indicates that the missions of MCCO and DHSMV-FHP support a merger. As you recall, weight enforcement was a function of the Florida Highway Patrol for many years and was moved to FDOT in the early 1980's through the legislative process. The merger into FDOT combined the inspection and regulatory function of the Public Service Commission into a unified approach to commercial motor vehicle enforcement. The Office of Motor Carrier Compliance evolved from that merger and is structured to provide a comprehensive approach to the enforcement and regulation of state and federal regulations governing commercial vehicle operations within the state of Florida.

While it is true that MCCO and FHP both hire and staff law enforcement officers in the same employment class with standard general qualifications, it cannot be concluded that because of the common qualifications the mission of the two agencies are the same. The salary ranges are different, and the state classification covers not only FHP and MCCO, but other state law enforcement agencies as well. Like all other state law enforcement officers, MCCO law enforcement personnel are certified under the scope of Chapter 943, Florida Statutes. However, MCCO's mission is specifically focused on commercial vehicle regulation, while FHP covers multiple areas of law enforcement.

While both patrol the same state highways and have offices in many of the same areas, the merger of offices and functions is not practical. For example, FHP facilities are not adequate in square footage or design to accommodate another law enforcement agency without costly renovations in most locations. Secondly, the mission of MCCO is dissimilar to that of FHP and

would cause confusion to the industry and the agency by attempting to merge both missions into one unified mission. A merger may well serve to dilute important components of highway safety and regulatory enforcement.

The consultant attempts to show that the exclusive regulatory focus on commercial vehicles and operations by MCCO closely resembles the regulatory and enforcement functions of FHP. I submit that the two agencies have vastly different missions that do have some commonality, but not to the extent portrayed by the report. MCCO has a defined mission dealing with state and federal regulations governing commercial vehicle operations. FHP has a much broader mission that governs driving behavior, licensing, crash investigation, traffic homicide investigation, criminal activity on public roadways, contraband interdiction and a variety of other law enforcement issues. There are distinguishing differences between various components of the MCCO mission and the FHP mission.

There are cost savings that can be gained from cooperative efforts between all state law enforcement entities. As you are aware, we are engaged in a partnership to provide radio and computer aided dispatch services to 12 state law enforcement agencies with an ultimate reduction from 33 dispatch locations to seven regional dispatch centers. Partnerships in recruiting, screening and training of law enforcement officers are another example of government efficiency in action. The partnership between FDOT and DHSMV on the Florida Turnpike continues to be a model of efficiency that provides a high level of public safety to the patrons using the facility.

In summary, the facts used by KMPG Consulting are not entirely on target. The actual costs associated with a merger would result in substantial additional costs to house, equip and train a unified component within DHSMV. The additional costs and the potential to dilute vital mission components from MCCO and FHP do not justify making this a priority of DHSMV.

Sincerely,

Fred O. Dickinson
Executive Director

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