Transportation and Growth Management: a Planning and Policy Agenda

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Transportation and Growth Management: A Planning and Policy Agenda

Center for Urban Transportation Research
University of South Florida
TRANSPORTATION AND GROWTH MANAGEMENT: A Planning and Policy Agenda

Center for Urban Transportation Research
University of South Florida

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January 1994
Preface

Recent legislation and fiscal trends in Florida and nationwide have created a unique combination of restraints and opportunities, providing an impetus for examining the way Florida conducts transportation planning. In response to these challenges, the Florida Legislature and the Governor’s Office directed the Center for Urban Transportation Research (CUTR) to undertake the State Transportation Policy Initiative (STPI). The purpose of this multi-phase study is to reevaluate the way transportation infrastructure and services are planned and developed at the state and local levels in Florida and to formulate options for implementing requirements of the 1991 Intermodal Surface Transportation Efficiency Act.

Efforts undertaken as part of Phase I of STPI include:

- a comprehensive review of local and regional planning in Florida in the context of State growth management requirements and federal legislation
- an evaluation of the impact of community design on transportation needs
- a review of the literature on the transportation costs of urban sprawl
- an evaluation of comprehensive transportation planning for state purposes
- an examination of the relationship between air quality and transportation planning, as practiced in Florida
- an evaluation of trends and forecasts of Florida’s population and transportation characteristics
- a study of transit, transportation demand management, level of service, and concurrency issues and of congestion management and urban mobility planning
- preparation of a state land use map by Florida’s Regional Planning Councils

This report is one of a series of publications resulting from Phase I of the State Transportation Policy Initiative.
The assistance of the following is gratefully acknowledged for their guidance and expertise on this project:

STPI Steering Committee

Chester "Ed" Colby  
Metro-Dade Transit Agency

Donald Crane, Jr.  
Floridians for Better Transportation

The Honorable Mario Diaz-Balart  
Florida State Senate

The Honorable James Hargrett, Jr.  
Florida State Senate

Wallace Hawkes III  
Greiner, Inc.

The Honorable Ed Healey  
Florida House of Representatives

Arthur Kennedy  
Florida Transportation Commission

David Kerr  
Chairman, Florida Transportation Commission

Gerhard Meisels  
Provost, University of South Florida

The Honorable Vernon Peeples  
Florida House of Representatives

Linda Loomis Shelley  
Secretary, Florida Department of Community Affairs

Ben Watts  
Secretary, Florida Department of Transportation

Virginia Bass Wetherell  
Secretary, Florida Department of Environmental Protection

Jack Wilson  
The Wilson Company

STPI Technical Advisory Committee

John Johnston  
Florida House of Representatives, Committee on Transportation

Jane Mathis  
Florida Transportation Commission

Patrick McCue  
Florida Department of Transportation

Richard McElveen  
Florida Department of Environmental Protection

David Mohler  
Florida State Senate, Transportation Committee

James Murley  
1000 Friends of Florida

Ben Starrett  
Florida Department of Community Affairs

Wes Watson  
Florida Transit Association

Randy Whitfield  
MPO Advisory Committee

Special thanks to the staff of local governments, metropolitan planning organizations, regional planning councils, and the many other agencies and individuals who participated in this research.
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Introduction

This work element of the State Transportation Policy Initiative is a review of local comprehensive plans in relation to Florida’s growth management requirements. This comprehensive study considers the changing policy context for land use and transportation planning, and identifies key issues that must be addressed in improving the consistency, coordination, and quality of local and regional planning efforts. Major topic areas include: determining future land use and transportation needs; consistency of land use and transportation planning; and intergovernmental coordination.

A cross-section of regions across the state were selected for study in an effort to capture Florida’s local and regional diversity. These included selected local governments, metropolitan planning organizations, and regional planning councils in the Miami metropolitan area, Southwest Florida, the Orlando metropolitan area, the Panhandle, the Treasure Coast, and Tampa Bay. The research process also involved extensive interviews with state, local, and regional planning officials, and a review of relevant literature, local comprehensive plans, long range transportation plans, and other documents.

An Overview of the Report

The Center for Urban Transportation Research (CUTR) has evaluated the legislative framework and rules that govern state and local transportation planning during a period of substantial change. The Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and changes to the Florida Transportation Code and growth management legislation during the 1993 Florida legislative session have created a new policy framework for transportation and land use planning.

The first chapter reviews the policy context for planning in Florida and implications of the changing policy framework.

Concerns have been raised that local governments are planning for more growth than necessary, given reasonable assumptions—a prospect that could result in premature investment in expanding transportation and other public facilities. Assumptions used in the development of socio-economic and land use forecasts are critical because these data are the starting point of the transportation planning process. The second chapter reviews methods used by local governments to plan for future land use needs and addresses the issue “How much is too much?”

It is widely understood that there is two-way interaction between transportation systems and land development. Yet this interaction is not adequately reflected through conventional planning and modeling methods. Greater consistency must therefore be achieved through adherence to a common policy framework in the land use and transportation decision process—a policy framework established by State and federal law.

Issues and recommendations regarding current transportation planning practice are examined in the third chapter. The challenges of achieving consistency between land use and transportation planning are discussed in the fourth chapter.

Finally, the report addresses the question of intergovernmental coordination.
Successful local transportation plans and programs require coordination on several levels, including coordination with adjacent communities, with the region and state, within the jurisdiction, and across agencies that represent different transportation modes. ISTEA and the ELMS-III amendments to Florida’s growth management legislation are placing even stronger emphasis on the role of intergovernmental coordination in achieving planning and policy objectives. The challenges of intergovernmental coordination and opportunities raised by the new statutory framework are discussed in the fifth chapter.

Recurring Themes
Several recurring themes emerged during the course of this study:

Vision. Vision is an essential component of planning. Effective visions incorporate a broad range of goals and translate values and preferences into specific action strategies. The result is a plan that is accessible to the public, offers short and long term results, and inspires political support. Limited planning budgets, a short time frame for preparation, and the demands of fulfilling state planning requirements resulted in a first round of plans aimed more at “achieving compliance” than establishing a long term vision. With the majority of plans in compliance, communities and MPOs now have the framework for establishing a local and regional vision. Adding to the difficulty of coordinating land use and transportation is the absence of regional consensus on how to grow. The challenge will be achieving harmony among conflicting visions.

Continuity and Leadership. Continuity of public policy and effective leadership go hand in hand, and both are crucial to the success of local and regional planning efforts. Jurisdictions with strong, high quality planning programs attribute their success to the vision and commitment of their local elected officials. Problems with intergovernmental coordination of planning efforts occur primarily in the political arena. Some communities are moving from the council/manager system, where authority is more dispersed, to a strong mayor system in the hope of achieving more effective political leadership. Yet leadership remains an elusive issue, tied more to the individual than the governmental structure. Communities should harness the leadership potential of citizens and civic leaders in the private and nonprofit sectors to improve the quality and continuity of the planning program. Public education and outreach will be crucial to the long term success of planning efforts.

Economic Development. Long range transportation and land use planning cannot be effective without grappling with the larger questions of economic development. Consideration must be given to characteristics of the local and regional economy, because these are the needs that the transportation system must serve. From a growth management perspective, characteristics of local and regional economies strongly influence the rate, timing, location, and quality of land development. Higher costs associated with urban infill and redevelopment can discourage reuse of declining urbanized areas, without a concerted public strategy for urban revitalization. Transportation facilities are essential for economic growth, but expansion decisions cannot be independent of growth management objectives. Coordination of transportation and growth management programs will ultimately enhance regional prosperity and quality of life. Effective public leadership and a coordinated economic development agenda that includes the private sector are essential, but frequently missing from the planning process.
Sustainability is also at issue—the need to balance economic productivity against the long term fiscal, environmental, and social costs of production. Water is perhaps the greatest natural limiting factor to Florida’s capacity for urbanization. Yet water management efforts have been impeded by the difficulty of achieving cooperation between competing jurisdictions and a history of inadequate stormwater management. Despite the immense contribution of agriculture to Florida’s economy and the nation’s food supply, agricultural lands are being removed from production at an alarming rate due to residential conversion. Competition for increased agricultural production continues to force heavy reliance on synthetic pesticides and fertilizers, straining Florida’s sensitive ecosystem. Many areas in Florida depend upon construction and tourism as a major part of their economic base. But to preserve its quality of life, Florida must continue to provide recreational opportunities, services, and infrastructure, while maintaining amenities of the natural and built environment.

Coastal Development. High demand for coastal development has produced a policy dilemma. How do we accommodate the desire of citizens to live and recreate along coastal areas, given the substantial threat to public safety and property associated with hurricanes and floods? State policies restrict coastal development due to hazards associated with hurricane-prone areas, the substantial public cost of rebuilding, and the environmental sensitivity of coastal areas. Yet state policies restricting coastal development have not been effective because of strong pressures to develop coastal areas. Local growth management plans must address hurricane evacuation needs and recognize the safe limits of coastal development. Public land acquisition is one possibility.

Private Property Rights. Public regulation sometimes goes so far as to interfere with constitutionally protected property rights. As the state and local growth management framework evolves, landholders and real estate groups are questioning the effect of these programs on private property rights, and the threat of regulatory takings claims is growing. Yet governments also add value to private land through regulatory action and expansion of public facilities. The debate over private property rights is being reframed to recognize public rights.

Dispute Resolution. Competition over tax base, conflicting development goals, and a strong home rule orientation fuels disputes between jurisdictions. Public efforts to manage or redirect growth can further lead to political upheaval and regulatory takings claims. The courts are a costly and often ineffective forum for weighing planning policy. As planning considerations become more complex, greater reliance is being placed upon mediation as a method of resolving intergovernmental conflicts and finding common ground between private initiatives and public policy.

Information and Resources. Successful planning requires consistent, adequate funding for the time and expertise required. Resource constraints are causing problems with maintaining the continuity and quality of local planning and regulatory efforts. The planning process also relies upon accurate and sufficient data. Although there is a wealth of data, much of it is not shared or is compiled in a manner incompatible for multiple uses.

Local land use classification systems vary widely, making it difficult to evaluate development trends on a local or regional basis. Geographic information systems are opening up new possibilities in planning and are suggesting the need for
greater consistency in information and classification systems.

**Uncertainty.** The effectiveness of planning depends upon the degree to which present actions and investments meet future needs. But long range planning is uncertain—especially in rapidly growing areas. Present transportation planning methods assume the realization of one scenario and fail to accommodate the many contingencies that could affect future conditions. Transportation planning methods and requirements can be revised to acknowledge the inherent uncertainty of the planning process and to address alternative future scenarios.

**Regulatory Policy.** Land development regulations should reflect planning goals. Yet local regulatory systems often fail to provide what the community is trying to achieve from a policy perspective. Although congested commercial strips top the list of the public’s least desired development patterns, the local planning and regulatory framework continues to prescribe them. Pre-existing land division or development patterns remain a practical constraint, but bureaucratic and political resistance to change and the threat of litigation have hampered efforts to innovate or strengthen local planning and regulation. An effective regulatory program is essential to achieving better coordination between land use and transportation. Communities should reevaluate their land development regulations in the context of modern needs.
The Policy Context

In 1950, the population of Florida was just under three million. By 1990, Florida's population had reached nearly thirteen million. The reasons for this have been well documented—employment and vacation opportunities, affordable air conditioning, mosquito control, growth in the number and affluence of retirees, and improved roadway access. Urbanization has been particularly great along the Atlantic and Gulf coasts and within the corridor connecting Tampa and Orlando. Based upon a variety of demographic assumptions for fertility, death rates, and migration, Florida is expected to reach a population of just under 19,000,000 by the year 2010.

Florida's attractiveness also relates to a long tradition of reluctance to tax citizens, business, or industry. A study by the Florida Taxation & Budget Reform Commission concluded that Florida has a higher tax capacity and lower tax effort than any southeastern state considered to be a regional competitor. Ad valorem property taxes are the largest single source of tax revenue for local government services. Yet Florida's $25,000 homestead exemption excluded nearly $78 billion worth of residential property from local tax rolls, an estimated $1.6 billion loss in fiscal year 1991-92. In Holmes County, an estimated 54 percent of residential property is entirely exempt from taxation. Rather than risk the politics of property tax increases, many jurisdictions have relied on pay later growth plans to provide public services and facilities. The combination of low taxes, high growth, and inadequate planning or regulatory controls in many jurisdictions created a climate ripe for haphazard growth.

Irresponsible developers platted huge areas and sold them off lot by lot to unsuspecting buyers across the country, only to later declare bankruptcy. Cities like Palm Bay and Port St. Lucie were left to shoulder service costs as the resident population exploded. Major thoroughfares across Florida were rapidly inundated with strip malls and, in the allure and promise of growth, development approvals were pushed through with little regard for planning considerations. The result was a legacy of low quality, sprawling development with serious long term implications for the state's physical and economic growth.

Intensive urbanization has had environmental implications as well. Water is being used faster than it can be replaced in many parts of the state, fresh water supplies are geographically unevenly distributed, and water supplies are vulnerable to contamination. Wildlife habitat is disappearing at an alarming rate, with several species facing extinction. Currently ranked in the top ten agricultural states, Florida's agricultural sector is fundamental to the state economy and the nation's food supply. Yet prime agricultural land is being rapidly converted to residential use. In this context, the Florida legislature moved to strengthen local planning programs. The push for stronger planning began with the passage of the Environmental Land and Water Management Act in 1972, a mandate for local planning and land development regulation in 1975, and a push for coordinated and fiscally responsible planning that culminated in the "Growth Management" Act of 1985 (see Table 1).
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| 1962 | Federal-Aid Highway Act | - Mandated long range transportation planning as a prerequisite for federal funding. Plans must be based on a continuing, comprehensive, and cooperative transportation planning process.  
- Promoted development of transportation systems embracing all transportation modes.  
- Established federal policy that urban transportation be integrated with land development. |
| 1972 | Environmental Land and Water Management Act (Chapter 380, F.S.) | - Established Areas of Critical State Concern and Development of Regional Impact (DRI) programs.  
- Gave regional planning agencies an active role in evaluating the regional impact of proposed developments.  
- Permitted a regional planning agency, DCA, or developer to appeal a local government development order to the Adjudicatory Commission.  
- Established the Environmental Land Management Study (ELMS) Committee to make recommendations strengthening local government land management processes and to evaluate the effectiveness of regional planning agencies with regard to land and water management. |
| 1973 | Florida State Comprehensive Planning Act (Chapter 23, F.S.) | - Created the Division of State Planning in the Department of Administration to oversee the implementation of the DRI and Areas of Critical State Concern programs.  
- Mandated a state comprehensive plan to provide the framework for planning and policy decisions. |
- Complemented the Areas of Critical State Concern program by providing funding for the purchase of public lands. |
| 1975 | Florida Water Resources Act (Chapter 373, F.S.) | - Controlled land use and established restrictions near important water sources.  
- Created five water management districts to be effective as of 1976. |
| 1973 | Federal-Aid Highway Act | - Separated funding for urban transportation planning and provided funds to metropolitan planning organizations (MPOs) for comprehensive transportation planning. |
| 1974 | Environmental Land Management Study Committee I (ELMS I) | - Recommended requiring all cities and counties to adopt a comprehensive plan. |
| 1975 | Local Government Comprehensive Planning Act (Chapter 163, F.S.) | - Required local governments to adopt a comprehensive plan containing elements addressing future land use, traffic, sewer, solid waste, drainage, conservation, recreation & open space, housing, intergovernmental relations, power plant sitings, and a coastal zone element for coastal areas.  
- Mandated consistency of local land use decisions with the adopted comprehensive plans. |
| 1976 | Metropolitan Planning Organizations (Federal Register, Vol 40, No 181) | - Required urbanized areas to designate an MPO to coordinate transportation issues of local governments and modal planning agencies.  
- Directed MPOs to develop a multimodal transportation plan for their respective region. The plan would consist of a 20-year long range element; a shorter range transportation systems management element; and a FIVE-year transportation improvement plan (TIP).  
- Required FHWA and UMTA to certify the planning process annually as a condition for receiving federal funds for projects. |
Table 1
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| 1980 | Florida Regional Planning Council (RPC) Act (Chapter 160, P.S.) | • Mandated the creation of RPCs in each comprehensive planning district of the state. Existing RPCs and councils of governments were to be reorganized under these requirements.  
• Required one-third of the voting members on an RPC’s governing board be gubernatorial appointees and not less than two-thirds be elected local officials.  
• Mandated each RPC to prepare and submit a comprehensive regional policy plan to the legislature. |
| 1984 | Environmental Land Management Study Committee II (ELMS II) | • Strongly recommended an integrated policy framework that ties local, regional, and state plans.  
• State and Regional Planning Act (Chapter 186)  
• Required the Office of the Governor to prepare a State Plan for managing growth and present it to the legislature.  
• Strengthened the mandate for RPCs to prepare Regional Policy Plans and appropriated funding for that purpose.  
• Required state agencies to prepare functional plans to serve as basis for budgets.  
• Gave RPCs a stronger role in assuring local compliance with state and regional policies and to provide technical assistance to local governments. |
| 1985 | State Comprehensive Plan (Chapter 187, P.S.) | • Created state comprehensive plan to serve as policy framework for other state, regional, and local plans. |
| | | **Revisions to Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, P.S.)** |
| | | • Required all local comprehensive plans be consistent with the State Comprehensive Plan and Comprehensive Regional Policy Plans.  
• Required public facilities and services needed to support development be available concurrent with the impact of the development. |
| 1988 | State Highway Access Management Act (Section 335.18, P.S.) | • Stated that owners of property abutting a state highway have a right to reasonable, but not unlimited, access.  
• Established an access control classification system for each segment of the State Highway System. |
| 1990 | Clean Air Act Amendments | • Required states to submit a State Implementation Plan (SIP) to EPA. The SIP, an air quality management plan, monitors, controls, maintains, and enforces air quality standards.  
• Expanded provisions that require federally approved or financially assisted projects to conform to a SIP.  
• Depending on the intensity of pollution, states were required to install pollution control programs for nonattainment areas and directed to achieve attainment standards within a specified period of time.  
• Authorized EPA to withhold highway money if a state or MPO fails to carry out SIP emission reduction requirements. |
| 1991 | Interstate Surface Transportation Efficiency Act (ISTEA) | • Provided state and local governments with more control over funding decisions.  
• Strengthened MPOs’ role in transportation project selection and decisionmaking.  
• Required all metropolitan areas of 200,000 persons or more be designated Transportation Management Areas (TMAs). TMAs are instructed to satisfy the requirements of the 1990 Clean Air Act Amendments |
Local governments, historically reliant on zoning to achieve community development goals, were provided much broader regulatory authority and new tools for managing the rate, timing, and location of growth. The legislature mandated State review of comprehensive plans to assure compliance with the state growth management policy, required consistency between plans and regulatory programs, and adopted a State policy plan to provide the policy context for regional and local planning (Chapter 187, F.S.).

The intent of the Growth Management Act was to encourage sustainable long term growth. The legislation required local governments to prepare financially feasible plans.

Concurrency was introduced, requiring the necessary facilities and services be in place when the impacts of development occur. Communities were to prevent unnecessary degradation of the environment and protect essential natural resources, including water, farmland, and wildlife habitat.

Yet the growth management process has experienced its own growing pains. Many communities faced a sobering picture of a local budget incapable of funding the desired level of service. The planning requirements seemed unwieldy
for smaller communities, limited by inadequate planning budgets and insufficient staff. And the compliance process was often mired in bureaucracy as the Department of Community Affairs and local governments wrangled over the terms of quality planning.

At the same time, concurrency, impact fees, and the prospect of rural and coastal growth controls were fueling the politics of planning. Growth management became a whipping post for a variety of economic ills— including a recession and state of overbuilding that had turned the real estate industry upside down. Yet layers of regulation and review had indeed caused development costs to spiral and more than a few developers had been held hostage in debates over “consistency” and “compliance.” Many began to question whether the growing preoccupation with the growth management process had come at the expense of private property rights.

Private property rights interests began to call for language in State planning legislation emphasizing the Fifth Amendment of the U.S. constitution, which prohibits the taking of private property for public use without just compensation. Chapter 163 was amended to recognize these constitutionally-protected private property rights. In July 1992, the Florida Legal Foundation was established to investigate judicial and regulatory proceedings that impinge on the rights of property owners.

The 1993 Florida Legislature passed CS/SB 1000, creating a study commission to research the issue of inverse condemnation. This paralleled a national private property rights campaign in 1992 that introduced private property rights bills in 27 state legislatures. But CS/SB 1000 was vetoed by Governor Lawton Chiles over concerns that the proposed “composition and charge to the commission...would stack the deck” on the side of private interests. It was replaced with Executive Order No. 93-150, creating a private property rights commission composed of a more balanced membership and charged with addressing government intervention both in its capacity to reduce and enhance property values (see Table 2).

Intense development pressure, constrained public budgets, and an environmental crisis have come together in Florida to define the context for planning and growth management. Continuing barriers to achieving planning goals are growing uncertainty regarding the regulatory limits of police power and the lack of a coordinated approach to land use and transportation planning.

A coordinated planning effort recognizes that transportation not only supports physical and economic growth in Florida, but also can direct and reinforce economic development. Another challenge has been undertaking transportation planning within a crisis-driven political environment that favors fast, visible results over long term planning solutions. And planning practice, although strongly defined through statute, in some cases has not lived up to the quality and coordination of effort envisioned by the legislature.

ELMS-III: The Changing Growth Management Framework

In 1991, Governor Chiles assembled the third Environmental Land Management Study Committee (ELMS-III) to address Florida’s continuing growth management needs (see Appendix I). The ELMS-III Committee dealt with a number of issues aimed at refining the State’s planning and growth management framework and addressing concerns over private property rights. Concurrency, intergovernmental coordination, defining the appropriate relationship between state and local plans, public infrastructure funding, the Devel-
The development of Regional Impact program, and the role of regional planning councils were among the many topics of debate.

After deliberating for approximately one year, the ELMS-III Committee made several recommendations that were later translated into CS/HB 2315, Local Government Comprehensive Planning and Land Development (hereinafter the ELMS-III Act). The bill was signed into law by Governor Chiles in May 1993 and took effect on July 1, 1993. These amendments established the next steps in the evolution of Florida's growth management framework (see Table 3). The DRI program will be phased out in all but rural counties and small cities, which have the option to retain the program. It will be replaced by a revised intergovernmental coordination element that must include procedures to identify joint planning areas, a dispute resolution process, a process to modify outstanding DRI orders, and a process to determine and mitigate extrajurisdictional impacts. These joint processes must include interlocal agreements for location and extension of public infrastructure subject to concurrency, such as transportation facilities. The framework for managing

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<td>EXECUTIVE ORDER NO. 93-150</td>
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<td>THE GOVERNOR'S PROPERTY RIGHTS STUDY COMMISSION II</td>
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The Governor's Property Rights Study Commission II shall be comprised of 15 persons appointed by the Governor as follows:

(a) three private property owners;
(b) one economist familiar with evaluation of property;
(c) two local government officials;
(d) the Secretary of the Department of Community Affairs or her designee;
(e) the Secretary of the Florida Department of Environmental Protection or her designee;
(f) a representative from a Water Management District;
(g) three representatives of conservation organizations;
(h) one person recommended by the Speaker of the House of Representatives;
(i) one person recommended by the President of the Senate;
(j) one representative of the Florida Bar, who shall serve as chair.

The Commission shall be charged with presenting a report to the Governor with copies to the Speaker of the House and President of the Senate by January 30, 1994, which makes specific recommendations on the following:

(a) the issue of protection of private property rights and the protection of the public interest in proper growth management and environmental protection;
(b) the current and potential effectiveness of Florida law in providing substantially affected persons with appropriate changes necessary to assure meaningful and effective remedy to affected property amounts;
(c) the degree to which the value of property owned by persons other than those seeking approval of new development may be adversely affected by adjacent new development that is authorized by state agencies and local governments, and the suggestion of any new remedies necessary to equitably protect the rights of these property owners;
(d) the costs and potential funding sources associated with payments of claims by landowners taken under any revisions of Florida law, as well as alternative remedies for such claims;
(e) an assessment of the degree to which the loss of fair market value of private property due to regulations is offset by the enhancement of value attributable to government action; and whether the specification of a particular statutory standard providing for the recapture by the public of an increase in fair market value caused by imposition of a regulation or the location of a publicly funded infrastructure would be appropriate, workable, and fair.
transportation concurrency was substantially revised to provide greater flexibility in meeting State and local growth management goals. Exemptions for infill and redevelopment were allowed, reflecting the realization that transportation concurrency requirements sometimes conflict with other goals, such as limiting urban sprawl and promoting downtown revitalization.

Long term concurrency management area and a “pay and go” process that permits payment of fees in lieu of transportation facility improvements were established. A less cumbersome process was provided for adopting Transportation Concurrency Management Areas (TCMAs), which permit the application of areawide level of service (LOS) standards within activity centers in return for promoting transit and other mobility objectives.

To address concerns that State government was not assuming responsibility for concurrency, the ELMS-III Act provided local governments with authority to set level of service standards on state roads that are not part of the Florida Intrastate Highway System. The Act also subjects state facilities, such as state university campuses and state roads, to local LOS standards and concurrency requirements. Campus master plans must now be consistent with the comprehensive plan of the host local government, and specific consideration must be given to land development and traffic circulation issues.

The ELMS-III Act also required revision of the State Comprehensive Plan to provide more strategic direction to growth management. Previously, general goals relating to growth and development in the State Comprehensive Plan were to be implemented through three agency “translational plans”: the Florida Transportation Plan, the State Land Development Plan, and the State Water Use Plan. The 1993 legislation changes this structure by replacing these three translational plans with a combined Strategic Growth and Development Plan.

Among other things, the Strategic Growth and Development Plan must be revised to identify urban growth centers and give guidelines for the appropriate location of urban growth, integrate state policy for transportation with land development, air quality and water resources, and provide guidelines for the

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<th>Table 3: ELMS-III Amendments</th>
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<td><strong>Key changes of the ELMS-III Act include:</strong></td>
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<td>- Phase out the development of regional impact (DRI) program by 1995, with an option to retain it in smaller cities and counties;</td>
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<td>- Replace the DRI program with stronger intergovernmental coordination requirements;</td>
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<td>- Eliminate the authority of RPCs to appeal DRI development orders;</td>
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<td>- Increase the flexibility of transportation concurrency by providing long term concurrency management areas, exemptions for redevelopment or infill, a pay and go option in lieu of improvements, and areawide level of service standards in activity centers;</td>
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<td>- Provide local authority to set level of service standards on state roads, except for those designated as part of the Florida Intrastate Highway System;</td>
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<td>- Eliminate the concurrency exemption previously allowed for state facilities, including the state university system;</td>
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<td>- Local governments within metropolitan planning organization boundaries must adopt a new transportation element that consolidates all aspects of transportation.</td>
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<td>- Eliminate the twice yearly limit on amendments to local government comprehensive plans and streamline amendment adoption.</td>
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<td>- Revise the state comprehensive plan to provide more strategic direction to growth management.</td>
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development of State transportation corridors, public transportation corridors, new interchanges, and new airports. This new strategic plan will integrate land, water, and transportation planning, and provide greater guidance to local governments in carrying out their comprehensive plans. Revisions of the State plan reflecting these changes will be prepared by the Governor’s Office by October 15, 1993, for review by the Administration Commission (a short adoption schedule that may prove unrealistic).

Similarly, the ELMS-III Act revised the regional policy plans to be strategic, rather than comprehensive, and consistent with the Strategic Growth and Development Plan. Although consideration was given to “sunsetting” Regional Planning Councils (RPCs), instead the decision was made to reauthorize RPCs and redirect their role away from Development of Regional Impact and plan review and toward providing technical assistance and mediating planning and development disputes.

RPCs are now responsible for conducting a cross-acceptance negotiation process to resolve regional and local plan inconsistency, coordinating land development and transportation to foster regional transportation systems, and identifying inconsistencies between local government plans and those of transportation agencies and MPOs. ELMS-III directed the Governor’s office to review the appropriateness of the RPC boundaries.

Transportation funding was another concern addressed by ELMS-III. Effective May 1, 1993, an additional one to five cent local option gas tax may be levied upon every gallon of motor fuel sold in a county. Such a tax may be adopted by a majority-plus-one vote of the governing body of the county or by referendum. The tax must be imposed by July 1 to be effective September of any year. Prior to imposition of the tax, the county may establish by interlocal agreement with the municipalities within the county, a formula for distributing the entire proceeds of the tax.

If no interlocal agreement is reached, the proceeds of the tax will be distributed among the county and municipalities based on transportation expenditures of each for the preceding five fiscal years. Local governments must utilize the additional local option gas tax revenue for transportation expenditures needed to meet the capital improvements element of the adopted comprehensive plan.

The ELMS-III Act also requires that the Department of Community Affairs and the Florida Department of Transportation study corridor preservation issues in Florida and develop a model transportation corridor protection ordinance for use by local governments. Guidelines for determining land use compatibility near airports must also be developed.

**ISTEA**

While Florida was pushing for stronger coordination of land use and transportation planning, a similar direction was being defined for federal transportation policy. The Intermodal Surface Transportation Efficiency Act of 1991 or ISTEA (“IceTea”) called for a new approach to transportation with an emphasis on mobility, alternative transportation modes, and stronger coordination of planning efforts. Unlike the limited funding categories of the Federal-Aid Highway programs, ISTEA offered a broad range of funding alternatives and embraced far more than roads and automobiles. Now, mobility is the measure, and transit has taken on new stature in the competition for federal dollars.

The policy thrust of ISTEA evolved in the 1980s as the National Interstate and
Defense Highway Program was winding down. It was then that policy makers began attending to a new concern. Although the Interstate program was in many ways a huge success, it had not solved the problem of traffic congestion in urban areas. With urban travel growing and fewer opportunities for highway expansion, new solutions had to be found. But dissent over future directions raised debates for a reduced rather than enhanced federal role in surface transportation.

By 1987, the push for increased investment and need for a more strategic approach to transportation problems led to the formation of the Transportation 2020 Task Force. After extensive fact-finding, including 65 grassroots public forums across the country, the Task Force proposed a national transportation strategy. The recommendations included more funding for surface transportation; greater flexibility; a stronger emphasis on safety; assurance of equitable allocation; regulatory reform in freight transportation; improvement in air quality; attention to intermodal access; support for public transportation; and more investment in research–with an emphasis on intelligent vehicle highway systems.9

These recommendations set the tone for a national strategic planning effort that culminated in the first comprehensive policy statement to come out of the U.S. Department of Transportation in more than a decade. The Statement of National Transportation Policy combined the strategies of Transportation 2020 and others into what became the policy framework for a new intermodal surface transportation program.

Debate over reauthorization of the surface transportation program focused largely on funding. Issues included the shortage of financial resources, whether to increase the federal gas tax, how much to authorize for the program, the amount of flexibility in using funds for non-highway purposes, the federal matching share, and the amount of authority to give local agencies in programming the funds.10 Disputes also centered on whether to continue federal transit operating assistance, criteria for new rail transit systems, and earmarking funds for special projects.

Ultimately, Congress settled on a package of authorizations that afforded considerable flexibility to State and local officials in setting priorities. ISTE A increased funding for planning, tied federal transportation decisions to state and local plans, strengthened state and metropolitan planning requirements, expanded public participation, provided flexibility in modal selection, and integrated transportation decisions with air quality objectives.

The result is a more comprehensive approach to transportation planning “that takes into account the relationships among land use and all transportation modes, without regard to the programmatic source of the planning funds” (Sec. 8(p)[11]). And techniques for shaping urban form, like comprehensive planning and growth management, have taken on new significance in planning and providing transportation improvements.

The package

ISTEA authorizes approximately $155 billion over six years for highways, mass transit, safety, and a host of other programs. Much of this funding is authorized through Title I, which includes the Surface Transportation Program, the National Highway System, bridges, demonstration projects, and the Congestion Mitigation and Air Quality program. The Act also sets aside a percentage of each state’s Surface Transportation Program funds for project or system enhancements. Enhancement funds may
be used for a variety of purposes including billboard control or removal, stormwater mitigation, pedestrian and bicycle amenities, acquiring scenic easements, historic preservation, or archeological research.

The Surface Transportation Program (STP) established a transportation block grant program for State and local governments, authorized at $23.9 billion over six years. Funds may be applied to construction activities on any federal aid roads, or to bridge projects on any public road regardless of federal-aid status. Other eligible projects include transit capital projects; carpool, parking, bicycle, and pedestrian facilities; highway and transit safety improvements; traffic monitoring, management and control; wetland mitigation; and transportation control measures for reducing traffic congestion and achieving air quality objectives.

For the first time, states are permitted to use regularly-apportioned funds for removal of nonconforming billboards. New outdoor advertising controls will apply to the Interstate System, the 1991 Federal-Aid Primary System, and any other highway included on the National Highway System. If illegal signs were not removed by the owner within 90 days after enactment of ISTEA, then states must remove the signs and bill the owners. For designated state scenic byways, ISTEA prohibits erection of any signs except for those exempted under the Highway Beautification Act of 1965 (i.e., on-premise and for sale signs).

The new Congestion Mitigation and Air Quality Improvement or CMAQ program ("See-Mac") was established under STP for transportation projects that enhance air quality in ozone and carbon monoxide nonattainment areas. CMAQ authorized $6 billion with an 80 percent federal matching share; funds are distributed based on the state’s share of the population of air quality non-attainment areas weighted by the degree of air pollution, with each state guaranteed a 1/2 percent minimum apportionment. If a state or MPO fails to carry out emissions reduction requirements in the State Implementation Plan for air quality required by the Clean Air Act Amendments of 1990, then the Environmental Protection Agency may withhold all or a portion of its highway money.

To test pricing strategies for reducing congestion, a Congestion Pricing Pilot Program was established for five pilot projects, with the requirement that three be on Interstate Highways. Congestion pricing imposes graduated user fees or tolls to discourage peak hour travel by commuters—a technique based upon the economics of supply and demand.

**A boost for transit**

Over the past decade, federal funding for transit has been cut more than 50 percent in real terms, even as the Americans with Disabilities Act and the Clean Air Act Amendments of 1990 imposed new federal mandates for transit service. ISTEA brought relief through higher funding levels and greater leverage to transit in the project selection process. Changes that provide a more level playing field include broader project selection criteria that address overall social, energy, economic, and environmental effects in weighing highways against transit, rather than cost alone.

Title III of ISTEA, the Federal Transit Act Amendments of 1991, increased the federal matching share for transit from 75 to 80 percent, making it equal to that of most highway programs and thus a neutral factor in project selection. Although the Interstate program will receive a 90 percent match, transit will be afforded a 90 percent match for capital costs associated with implementing the Americans with Disabilities Act and the Clean
Air Act Amendments of 1990. Greater funding flexibility allows previously highway-only dollars to be transferred to transit projects. Although in large metropolitan areas Section 9 transit funds under Title III (barring operating expenses) are also eligible for transfer to highway programs, this is subject to several restrictions (Sec. 3013[h]).

The Clean Air Act Amendments of 1990, ISTEA's CMAQ program, and new metropolitan planning requirements mandate serious consideration of transit alternatives to road building—especially in air quality nonattainment areas. When preparing transportation plans and TIPs, nonattainment areas must incorporate Transportation Control Measures (TCMs)—projects that improve traffic flow, reduce congestion, or reduce vehicle usage. These include improved public transit, dedicated high occupancy vehicle lanes, park and ride programs, and others that support transit service. ISTEA prohibits use of any CMAQ funds for constructing highway lanes unless they are dedicated to high occupancy vehicles during peak travel times.

Complementing transit requirements is a federal push for Transportation Demand Management (TDM) to improve mobility and meet air quality requirements. TDM refers to a wide range of techniques for reducing demand and encouraging mode shifts. Examples include ridesharing, vanpools, telecommuting (work at home programs), flexible working hours, related public relations and outreach efforts, limits on parking spaces, higher parking fees, and transit subsidies.

Financial requirements
It remains uncertain how much ISTEA money ultimately will be made available, but appropriation levels already have fallen short of expectations. Authorization levels that have not been met include those for transit, which was appropriated only $3.8 billion of ISTEA's $5.4 billion authorization for FY 92. New "pay as you go" provisions require states to include in their State Transportation Improvement Program (STIP) only those projects where full funding can "reasonably be anticipated to be available" for the project within the time contemplated for completion. States must prepare a financial plan for the STIP that identifies funding sources and revenues and is tied to the priorities and timetables established in the STIP. One reason for these changes was to prevent "wish list" projects or programs with no identified source of funding from distorting the air quality impact of a Transportation Improvement Program.

Questions surround the issue of what does or does not qualify as a reasonably anticipated funding source—especially given the vagaries of the federal appropriations process. Senate Report 102-71 advised that "historical funding levels, existing bonding authority, existing state and local tax revenues, allocation of federal funds under the Surface Transportation Program, and other relevant factors may be used in determining whether funding can reasonably be anticipated." Speculative or prospective sources, such as unauthorized bond issues or unenacted tax increases or tolls, would not qualify.

On a regional level, MPOs are required to evaluate the financial feasibility of proposed improvement programs and prepare a balanced TIP that reflects the cost of the projects, available revenue, and any innovative funding strategies to be pursued. The TIP may only include projects or phases of projects "if full funding can reasonably be anticipated to be available for the project within the time period contemplated for completion of the project" (Sec. 134[h][5]). MPOs must also demonstrate adequate financial
commitments for projects identified in the long range plan.

**Florida ISTEA**
The State of Florida passed CS/SB 1328 in 1993, known as Florida ISTEA, to carry out federal ISTEA directives on the State level. The new transportation law changes the requirements for the Florida Transportation Plan, including requiring an annual update of the Florida Transportation Plan, and establishes requirements for a five-year State Transportation Improvement Program—including a requirement for consistency with the long range Florida Transportation Plan.

State and metropolitan planning requirements are also substantially revised, requiring greater public involvement and attention to the planning considerations detailed in ISTEA. These considerations include the impact of transportation on land development patterns, connectivity among metropolitan areas within the state, and strategies to use the existing transportation system more efficiently. The new planning framework and the changing role of MPOs are discussed in more detail in the second and third chapters of this report. The Florida Transportation Commission must prepare recommendations for implementing the ISTEA intermodal emphasis by December 15, 1993.

Increased flexibility has resulted from amendments to State funding allocation for public transit operations and transit corridor projects. Florida ISTEA also amends procedures that are intended to result in greater cost effectiveness and revenue-raising capacity in right-of-way acquisition. Authorized uses of the constitutional gas tax have been expanded to include highway repair and maintenance.

**Conclusions**
The policy changes brought about by the ELMS legislation and ISTEA have yet to be realized, as administrative rules and guidelines are still being drafted by federal and state agencies. The Advisory Council on Intergovernmental Relations has been charged with determining the costs to local governments of the ELMS legislation. Several other studies are also under way, including the development by CUTR of a functional classification system and criteria for determining which roads come under the responsibility of local or state government.

Because the policy framework is still evolving, its implications are not yet fully understood. Among the changes that are apparent is that ISTEA will require greater technical and interpersonal skills in identifying solutions to transportation problems. Also apparent is a policy push for stronger regional coordination of land use and transportation planning.

In turn, the public must be better informed of transportation and growth management objectives. Planning under both ISTEA and the ELMS-III amendments will become more participatory, and planning agencies will have to establish stronger outreach programs to educate citizens, the private sector, and elected officials regarding strategic objectives. ISTEA's new requirements are already making transportation planning much more visible—not only to citizen groups, but to local governments as well. This should promote greater cooperation and trust across local governments in a region. As one MPO official stated: "It's a fair and open process that eventually gets you to better planning decisions... It's becoming increasingly hard to cut private deals."13

Yet the divisiveness of regional politics will remain a major hurdle. Given the fundamental distrust of regional governance that has long characterized American politics, achieving regional consensus on transportation and ultimately land use...
issues will require a phenomenal change in the way many communities and MPOs do business. Professional politics are also at issue. Transportation planners, urban designers, and land use planners must work cooperatively if congestion management and mobility objectives are to be realized.

Dispute resolution techniques will be crucial not only to comprehensive planning, but also to effective regional transportation planning under ISTEA. Regional planning councils and metropolitan planning organizations must be more effective in coordinating their efforts and building consensus among their member governments. The potential rewards and trade-offs municipalities can make under the more flexible guidelines should encourage stronger coordination. As one federal highway official put it, "Federal money tends to flow to the point of least resistance." Communities most likely to capitalize on ISTEA will be those with a regional transportation vision and plan in hand. Those who cannot agree may be left empty-handed.
Determining Future Land Use Needs

State planning and growth management policy calls for provision of public facilities concurrent with the impacts of development and encourages higher intensity growth within and around already urbanized areas. Compact growth is the goal—a term that discourages ribbon or leapfrog development in favor of conservation of rural lands and a plan for phasing growth and the extension of public facilities and services out from the urban core. Concerns have been raised that some communities are setting aside far more land than required to accommodate reasonable estimates of growth—a prospect that would undermine planning goals and could lead to overprojection of transportation and other facility needs.

This chapter examines methods used by local governments in Florida to determine future land use needs in the comprehensive planning process and issues surrounding the question “how much is too much?” The chapter begins with an overview of the land use planning process—including socio-economic forecasting, land use allocation, and land use classification systems—and discusses a variety of issues that should be addressed in the effort to guide land use and transportation planning toward growth management goals.

The Future Land Use Planning Process

Comprehensive planning guides the long term development of a community. The comprehensive plan analyzes development trends, identifies key planning issues, provides the policy framework to guide future growth, and specifies action strategies. It is an opportunity to increase citizen awareness of the forces of change and enables the community to make informed decisions regarding a strategic course of action. Technical studies of growth trends and land use needs provide a starting point for preparing alternative development scenarios. A scenario is selected based upon local policies and community consensus.

Preparation of a land use plan begins with analyses of characteristics of the land, including existing land use, land division and ownership, public facilities and utilities, natural resource inventories, and land suitability analyses for various types of development. A future land use plan is prepared based on projected land use needs, planning principles, and community goals, objectives, and policies. Rule 9J-5.006(2) requires the future land use plan to include:

- a review of available facilities and services to serve existing land uses and land for which development orders have been issued, as well as a determination as to whether the character and magnitude of existing vacant or undeveloped land is suitable for use;
- analysis of the amount of land needed to accommodate the projected population, based on categories of land use and their densities or intensities of use, the estimated gross acreage needed by category, and a description of the methodology used;
- analysis of the need for redevelopment, including renewal of blighted areas, and elimination or reduction of uses inconsistent with the community’s character and proposed future land uses;
- analysis of the proposed development and redevelopment of flood prone areas based upon a suitability determination from Flood Insurance Rate Maps,
Flood Hazard Boundary Maps, or other more accurate information.

Future land use forecasts are typically based on a relationship between population or employment and land use acreage. However, local governments that are nearly built out may begin with available acreage and base their population projections on desired densities and future land use. Another essential input to determining future land use needs is the location and capacity of existing facilities, including water and sewer, schools, parks and recreation, emergency services, and roads. Level of service standards and available capacity are compared to future population to determine future facilities needs.

Rule 9J-5 requires that plans must be financially feasible. Capital improvement elements must demonstrate that facilities or services are available or planned to accommodate the projected population. This helps assure that local governments do not anticipate any more growth than they can reasonably afford, given constrained local budgets and the existing burden on area taxpayers.

**Socio-economic forecasting**

Population and employment projections are the basis for determining future land use needs. Population projections are used to estimate residential land use needs, whereas employment projections are used to estimate nonresidential land use needs. Rule 9J-5.005(2)(e) of the State Administrative Code requires comprehensive plans to be based on estimates and projections of both resident and seasonal population. Resident population projections are provided by the University of Florida's Bureau of Economic and Business Research (BEBR) or may be generated by the local government—subject to review by the Department of Community Affairs. Each local government must prepare its own seasonal population estimates and projections.

BEBR estimates Florida’s resident population by calculating a ratio of the number of permanent households reported in the latest Census compared to the number of active residential electric customers and applying this ratio to the total number of active residential electric customers in each incorporated municipality within a county, as well as all unincorporated areas within that same county. Occasionally (about five percent of the time) building permit data will be used rather than the active residential electric customers. The estimates of existing resident population are compared to a control total. This control total is based on a statewide estimate of existing population, and is further divided into county and city totals.

The population estimate is then projected using four techniques: linear, exponential, shift, and share. The growth rate is computed on a base period of the last five years, the last ten years, and the last fifteen years. The results for each technique, excluding any outliers, are then averaged for the projection. This technique is applied first for the state as a whole, then for each county. The county totals are summed and then adjusted to adhere to a state control total. Because the projected growth rates reflect historical growth, factors such as county build-out are not taken into account. Rather, it is expected that as counties approach build-out, the actual rate of growth will slow, which in turn will be reflected in future projections.

BEBR prepares high, medium, and low projections for each county. The method described above produces the “medium” figure, which is the one recommended for planning purposes. The high and low figures are based on a national study conducted by BEBR to determine the relationship between actual and projected population estimates for 3,000 counties across the U.S. Counties are grouped
based upon population and growth rate and rates derived in the study are applied to determine the upper and lower bounds for counties in that category.\textsuperscript{15}

Future population estimates for each county are checked against control totals for the state and then adjusted so the sum of all projections are limited by the state control totals. To minimize bias caused by cyclical variation in the migration rate, the base period from which to establish a growth projection should be longer than one business cycle—preferably as long a period as possible given available data. BEBR’s projection methodology analyzes trends over a 15-year period and gives equal weight to projections based on ten- and five-year base periods.

The State does not require the sum of the future projections of cities and the unincorporated area to equal the county projected future population. In fact, the county projections are not used as control totals. However, local planning staff often work each other and the area MPO in developing population projections for land use and transportation planning purposes. For example, the Lee County planning staff have been working with the Lee County MPO to develop 2020 population forecasts for traffic analysis zones.

Employment projections are commonly based upon a local proportion of regional employment or a ratio of local employment to population. Information on employment by sector (i.e., retail, agriculture, manufacturing, services, etc.) is available from the Census for counties and metropolitan areas. Many communities obtain employment information from the Florida Department of Labor and Employment Security or the U.S. Bureau of Economic Analysis. Others supplement their databases with data purchased from private agencies. Current employment information is often difficult to obtain for smaller communities.

Risks are evident when basing projections on historical trends. BEBR’s practice of averaging and providing equal weighting to three base periods incorporates the possibility that the future will be a continuation of a long term trend and the possibility that the future forecast period will resemble recent trends. Yet unforeseeable events could substantially change future trends, such as a major new employer, technological change, or a disaster like Hurricane Andrew, which caused Dade County to scale down its future projected growth.

**Land use forecasting and flexibility**

Methods for translating population and employment projections into future land use needs vary. The results of such forecasts provide communities with a rule of thumb regarding future growth. But like socio-economic forecasts, such data are inherently uncertain and difficult to predict. Thus, the process also requires some flexibility and discretion of local planning officials in tailoring estimates to local circumstances.

Flexibility is essential in land development planning for market reasons and due to unforeseen circumstances that could affect anticipated land use needs. These factors include individuals and firms that may require land in excess of the estimated need, land expected to be available but withheld from use by the property owners, or legal complications that make land unavailable for development.\textsuperscript{16}

Flexibility is incorporated into the land use planning process through market flexibility factors. Standard practice is to provide for 25 percent more land than growth projections suggest to allow market flexibility. The Department of Community Affairs applies the generally accepted planning rule of thumb that local governments should establish potential residential land that does not
exceed 125 percent of the amount required to accommodate the future projected population.

What follows is a review of the general process and methods used for estimating future land use needs and case studies of how this method is applied in selected Florida communities.

**Residential land use needs**

Population estimates and persons per household ratios are used to determine residential acreage needs. A generalized process for translating population into residential land use needs is presented in the MSPO "Workbook for Preparing a Master Plan" as follows:

a) calculate undeveloped acreage in each residential subarea or zoning district;

b) determine the desired residential density (dwelling units/acre);

c) apply the estimated future population to each area based on current average density by subarea or zone;

d) divide the future population by the estimated average household size at that density to determine the number of future dwelling units;

e) calculate acreage needs for these dwelling units by multiplying the density by the total number of dwelling units;

f) adjust the gross acreage for right-of-way needs by multiplying it by 1.25 percent.\(^7\)

Residential acreage needs are sensitive to household size, changes to the existing stock of housing, desired density, and vacancy rate changes. Although the use of a five percent vacancy rate is common, communities with seasonal populations require special studies to determine reasonable vacancy rates. Estimated acreage needs will vary according to assumptions regarding household size and housing mix or density. Higher densities can accommodate more residents in less acreage, while larger household size, means more persons per dwelling unit, and so on. As household size declines, for example, residential acreage needs in a community that plans primarily for single family housing will increase.

Determinations of land available for residential use include consideration of the rate at which vacant lots are expected to fill in and the rate at which condemned units will be replaced. "Soft sites," or areas subject to development pressure that are not developed to the maximum allowable density, may also be considered in urban core areas.

Gross residential acreage needs also include streets. A rule of thumb for accounting for right-of-way needs is to increase the estimated residential acreage by 25 percent. Net residential densities reflect housing needs and are used to anticipate at what density future development will likely occur. Net residential densities are the number of dwelling units per acre of land either in use or proposed to be used for residential purposes.

Under the methodology for determining required acreage for public facilities, communities must factor unused capacity of existing facilities into calculations of need for additional facilities.

Several communities in Florida have large tracts of platted land vested for development that raise special considerations in determining future land use needs. Future land use estimates can be revised to account for vested future residential development by determining the expected buildout capacity of these areas during the planning period and allocating that proportion of future households at the given density. Future residential acreage needs are then scaled back accordingly. Yet some of these plats are so large they could literally consume the majority of
future residential population capacity in an entire county (see Lee County). The challenge is to plan for the population capacity of large vested plats while preserving residential opportunities in other areas.

Clearly, the timing of future growth is an issue in any future land use plan, especially where vested development must be addressed. If buildout occurred too rapidly, then it could overload public facilities and services. An alternative for balancing new and vested residential growth with the capacity of public facilities is to time and phase residential development. Faced with 40,000 approved and vested residential units, Martin County established the Active Residential Developments Program (ART-AP)–a unique management system that accounts for approved and new projects through a 15-year planning period.

ART-AP is an early warning system for monitoring active residential building to ensure adherence to the 125 percent rule of the Department of Community Affairs. Within the 15-year planning period, five-year increments are established within which the 40,000 units are allocated over the first, second, and third five-year periods. New development requests must establish timelines so as not to exceed available public facility capacity within any of those five-year periods.

Commercial land use needs
Commercial land use needs may be determined by calculating an existing ratio of commercial acreage to current population, then multiplying the ratio by the estimated future population increase. Standards for space needs for various types of uses are established using the number of employees or shoppers per square foot. The average number of floors, space for parking, service and loading areas, landscaping, driveways, and so on are factored into the calculation to determine acreage requirements within designated planning areas.

A flexibility factor may be applied to increase the acreage needs for office and retail in already urbanized areas to provide greater choice of location for leasing. This factor is estimated, taking into account local conditions, including estimated future vacancy rates. A factor of 20 percent is not uncommon. Commercial space needs are first allocated to available space on existing commercial sites (including vacant, underutilized and transitional areas) and then to undeveloped land. If more land is available than needed for these uses, the surplus land should be entered into a surplus land tally or converted to other uses.

Many local governments, especially those encompassing the urban and suburban fringe, allocate a majority of their estimated commercial acreage needs in ribbons along major corridors. This has encouraged "urban sprawl" and has led to land use and transportation conflicts (see chapter on "Land Development Regulation"). A more desirable approach is to provide for a well balanced system of neighborhood commercial uses and encourage development of commercial services core areas served by local roads and accessible via alternative modes of transportation.

Industrial land use needs
For industrial land uses, it is necessary to develop local standards for densities as determined by changing technology and other trends. These densities are in the form of employees per acre or are more detailed according to type of industry. Floor area ratios derived from surveys, in floor space per employee, are used to determine employees per acre. Estimates of employment growth are then applied to factors for employees per acre to determine the acreage needed. Care must
be exercised because the rate of growth of land use needs for industry may not necessarily follow the rate of growth in employment.

Estimated industrial acreage needs are allocated first to vacant industrial areas and then to vacant undeveloped land—taking into account spatial and locational needs due to changing technologies and economic restructuring. Industrial reserves are usually earmarked to allow for greater growth than anticipated or for operations requiring a very large site. Flexibility factors commonly increase the estimated industrial land needed by 25 to 50 percent.

If much more vacant or underutilized industrial land is available than estimates suggest is needed, then the community may need to reevaluate its assumptions and convert this surplus to other uses that may be more appropriate in the market context. Some communities choose to allocate much more land than estimates suggest is needed for industrial purposes in an effort to attract new industries and promote economic diversification (see, for example, Lee County). This is generally not a successful strategy if taken alone, because industrial development and diversification requires consideration of a variety of factors other than land availability, such as availability of skilled labor, access to markets, access to resources and materials, and so on.

Case Studies
Florida local governments use a variety of methods to estimate and forecast population and future land use needs. Following are several case studies that illustrate the diversity of methods, assumptions, and constraints that guide determination of future land use needs.

Lee County
Lee County has experienced the second highest growth rate in the nation for an urban area of its size. The county’s population increased 63 percent over the 1980s, with over 97 percent of this increase explained by in-migration. The County selected BEBR’s high range projection for permanent resident population based on this growth rate, and a determination that the county will continue to encourage its high growth potential. The Lee County Comprehensive Plan uses a population projection that includes both seasonal and permanent resident population for the planning horizon year 2010 (peak month average daily population). Planning districts and municipalities within Lee County were assigned portions of the projection according to an analysis of build-out capacity. The build-out potential of each planning district was determined using estimates of vacant land and future housing densities applied to vacant land acreages. This resulted in the total number of housing units possible per planning district. Four planning districts were assumed to be built out by 2010. For other planning districts, a proportion of total build-out was estimated. Assumed occupancy rates and persons per household factors, specific to unincorporated Lee County and its municipalities, were then applied to the total number of anticipated housing units to determine permanent resident population per planning district.

Seasonal resident population was determined as a function of available 2010 housing units that are “vacant, held for occasional use,” according to the Census designation. Assuming a constant proportion of vacant housing, as derived from 1980 Census data, the total number of housing units available for seasonal residents was determined and multiplied by persons per household for a total seasonal resident population for each planning district.

Concerns have been raised that Lee County and its municipalities have the
combined capacity to accommodate far more growth than reasonable given projected population for the planning period. Lee County’s Evaluation and Appraisal Report (EAR) acknowledged that the future land use map at build-out could accommodate approximately 664,000 more people than projected for the year 2020 planning horizon. Much of this discrepancy was attributed to the presence of two large platted and vested communities—the City of Cape Coral and unincorporated Lehigh Acres.

Lehigh Acres in unincorporated Lee County contains over 130,000 platted lots. The development rights of these lots are protected by a determination of vested rights and two settlement agreements with the Department of Community Affairs. Lee County proposes to address this problem through a Vested Community land use category in which building permits would be granted for a specified number of additional dwelling units by the year 2020. It also specifies a maximum density and prohibits further subdivision of previously platted lots.

Cape Coral, an incorporated municipality in Lee County, also contains thousands of lots platted and vested for development in the 1960s and 1970s. The population accommodated under the Cape Coral Plan for the planning period is more than 100,000 persons higher than the community’s projected population, yet the plan was found in compliance because the development rights of the area have already been vested. Lee County argues that this same consideration should be given the County, and that the surplus represented by Cape Coral should not be considered when evaluating the population accommodation capacity of the Lee County future land use plan.

By subtracting out the population surplus represented by Cape Coral and revising the acreage quantities of various land use categories, Lee County argues that the population capacity of its future land use map would be approximately 19 percent greater than the projected county population. This falls within the 25 percent flexibility margin considered necessary for the market to operate.

The County also proposed to eliminate a regulatory overlay that restricted building permits to a certain percentage of buildout for each planning district. The overlay was adopted to manage the rate of growth in the unincorporated County. Yet planners say it is confusing and unwieldy to administer. Another proposal to phase building permits only in Lehigh Acres, however, also was dropped, leaving the County with no mechanism for managing the rate and timing of growth. Growth of Lehigh Acres will be an ongoing problem given an actual growth rate of 107 percent between 1980 and 1990.

Cape Coral and Lehigh Acres together could accommodate a significant portion (if not all) of the future projected population of Lee County over the planning period. Yet because the plats are already vested and because coastal portions of the county have are already developed and continue to experience substantial development pressure, the County wishes to plan for that growth and to preserve some residential opportunities in the unincorporated areas outside of Lehigh Acres.

This illustrates the difficulty of planning under the constraint of immense, residential plats, vested for development. State and regional planning and financial resources should be targeted toward assisting communities like Lee County in addressing the problems posed by these huge, vested plats. Growth management mechanisms, such as timed restrictions on issuance of building permits, address the need for balancing provision of infrastructure and services with demand. Yet,
given the magnitude of problems posed by these plats, a more strategic approach is needed to manage long term public costs and the quality of the built environment. Strategies for retrofitting these areas are presented in the discussion of land use imbalances later in this chapter.

Another discrepancy in Lee County’s future land use plan relates to the county’s projected industrial land use needs. The current ratio of manufacturing employment to population in Lee County was estimated at .019 or 1.9 percent. To promote industrial development and diversification, an ambitious target for manufacturing employment was set at 7.5 percent by the year 2010. Several land use designations were provided on the Future Land Use Map to accommodate various levels of industrial development, including Industrial Development, two Industrial Interchange categories, Intensive Development, Central Urban, and Urban Community.

The County’s Evaluation and Appraisal Report (1993) states that the county has been unable to attract projected levels of industrial development. To address the shortfall, the County plans to:

- eliminate industrial categories for interchange areas;
- scale back acreage designated under the Industrial Development classification from 9671 acres to 9426 acres;
- change the definition of the Industrial Development category; and
- concentrate economic diversification efforts upon the airport site and university site development.

The site selected for the tenth State university is east of I-75 and south of the Southwest Florida Regional Airport. The Lee County EAR proposes redesignating approximately 2,800 acres of land within this vicinity from “Density Reduction/Groundwater Resource Protection” to “University Community.” The County’s policy for Groundwater Resource Protection Areas (Policy 1.4.4) would seem to prohibit consideration of such a site for intensive development. Specifically, the policy states that these areas provide substantial recharge to aquifers and permitted land uses shall be compatible with maintaining surface and groundwater levels. County planners have stated that they will require a regional stormwater management and groundwater protection strategy for this environmentally sensitive area. Yet concerns remain regarding the effect of such intensive development on the area’s water resources.

The proposed future land use plan for the area also suffers from inadequate attention to the overall land use mix. The plan calls for 100 percent of the “University Community” acreage to be for residential use at an overall density of 2.5 units per acre, to be clustered at higher densities. Assuming an average household size of 2.09, the County estimates that this area would accommodate a total population of nearly 14,000 persons during the planning horizon. But rather than integrating a mix of goods, services, and recreational opportunities into the context of the University Development area, the plan calls for focusing non-residential activity around new interchange areas—a proposition that does little to remove local traffic off of the region’s major thoroughfares or to allow non-vehicular access. The County’s “New Community” land use category, which calls for large-scale, multi-use planned communities, would seem to be more appropriate.

**Hillsborough County**

Hillsborough County used BEBR high projections for their permanent population estimates and projections. The seasonal population estimates and projec-
tions were based on three components: seasonal housing units, transient popu-
lation (hotel/motel occupants), and migrant farmworker population. Seasonal hous-
ing units were based on data from the 1980 census. The transient population
represents tourist and business trips, estimated by the Division of Hotel/
Motel/Restaurants, and was projected using a mathematical extrapolation
model. The migrant farmworker component was based upon data from the
Florida Rural Legal Services, Inc., and Hillsborough County School Board
statistics on migrant children enrollment. This component of the seasonal popu-
lation was expected to decrease over the planning period based on an assumed
decrease in agricultural acreage and changing harvesting techniques.

Employment estimates and projections were prepared for three employment
categories: industrial, commercial, and services. The control total for the 1988
employment estimate was based on two sources: annual average employment as
reported by the Florida Department of Labor and an estimate of sole proprietors
produced by the U.S. Bureau of Economic Analysis (USBEA). Distribution of the
1988 employment control total into the three employment categories of industrial,
commercial, and services was accomplished by applying the percentage
distribution of Department of Labor data by employment category to the control
total. The 2000 and 2010 control totals were obtained by applying the average
absolute annual change observed between 1974 and 1988 in the Department of
Labor and USBEA data. These control totals were then divided into industrial,
commercial, and service employment categories as well.18

Future land use needs for Hillsborough County were determined based on a
future land use scenario of nodal activity centers. The function and character of
each node would be used for classification purposes (High Intensity Node,
Mixed Use Regional Node, Community Center Node, or Neighborhood Node).
Prior to any evaluation, land use categories were revised from those used in
previous plans, to account for past problems and address specific citizen
concerns. Assumptions regarding build-out were made to identify holding capacities
for each land use type and adjusted to account for disparities between permitted
and actual development by plan category.

Hillsborough County did not experience the level of growth expected prior to plan
preparation—an expectation that had led the County to use the high growth
scenario, rather than the recommended medium growth scenario of the Bureau of
Economic and Business Research. The Hillsborough County MPO had also used
the high growth scenario for transportation facility planning. Because of a
shortfall in projected growth, the Hillsborough City-County Planning
Commission recommended that County Commissioners scale back planning
projections to a medium growth scenario.

The recommendation was based not only on a population shortfall but also upon
environmental concerns and policy changes aimed at encouraging redevelopment,
mass transit, and compact growth.19 Supporting the policy change, said the
Planning Commission's report, was a countywide visioning effort in which
residents indicated support for "quality, managed growth" over "rapid population
growth."20 To fulfill these objectives, the Planning Commission proposed
downzoning the density and intensity of development in several areas of
Hillsborough County.

Pasco County
Pasco County used BEBR medium
population estimates, then applied share
and linear population projection method-
ologies for forecasting. In determining seasonal population, the 1980 U.S. Census was used to determine the number of units held for occasional use and the number classified as Seasonal/Migratory. The Census information also provided an average non-resident household size of 1.91 persons per unit, which was applied to the number of units to derive seasonal residents in seasonal housing units.

Information from various State, regional, and County agencies was used to determine the number of motel units and recreational vehicle spaces in Pasco County in 1987, against which the 1.91 was multiplied to get seasonal population in motels and campgrounds. The totals for seasonal housing units and campgrounds/motels were added to the total resident population. This number was divided by total permanent population to derive the county’s seasonal multiplier of 1.22.21

Employment projections were based on a regression analysis of the relationship between employment increase and population growth. The method involved disaggregation of employment data into industrial, commercial trade, and service employment. Separate regressions were performed for industrial, commercial trade, and service employment. The three regressions were summed for total projected employment. The data were divided into municipal and unincorporated areas. A ratio of employment to population in 1987 for each local government was used to disaggregate the data into municipal and unincorporated areas and project future employment.22

Projected acreage requirements for each land use type were estimated using the following assumptions and techniques. Future permanent population estimates were converted to households on the basis of 2.28 persons per household. A factor of 2.05 persons per household was used to convert future seasonal population estimates to households, rather than the average household size of 1.91 used for motels and campgrounds. It is unclear whether that portion of seasonal population predicted to reside in such facilities was differentiated from estimates of future seasonal housing needs (see Pinellas County method).

The future housing unit mix for permanent and seasonal households was assumed to remain constant from 1987 to 2010. Based on existing zoning, average gross densities were assumed at 2.1 dwelling units per acre for single family, 15.0 units per acre for multi-family, and 8.8 units per acre for manufactured housing.

Non-residential acreage was computed on the basis of future employment by place of work for each of eight major standard industrial classification (SIC) groups. These groups were construction, manufacturing, transportation and utilities, wholesale trade, retail trade, finance insurance and real estate; services, and government. Agricultural acreage was treated as a residual function of these groups, as farming and agricultural related employment was projected to experience a net decline.23

**Pinellas County**

Because it is facing build-out, Pinellas County prepared its own resident population projections, rather than using those of BEBR which continue upwards even after the year of projected build-out. Based on historical data, the county estimated that it will be built out by the year 2030. Since 1976, Pinellas County has used socio-economic variables to forecast population and employment. The number of residents in single-family and multi-family dwelling units and other variables, such as automobile ownership per dwelling unit, were used to develop permanent (resident) population and
seasonal (transient) population. To establish the 1980 baseline, occupancy rates used were: single-family dwelling unit, 2.16; multi-family dwelling unit, 1.65; and seasonal units, 2.16.

The next step was to determine 2030 conditions. These figures were generated by measuring the acreage of the 22 land use categories on the 1982 Comprehensive Land Use Plan map for Pinellas County. Each land use category was assigned a maximum allowable density and a road factor. The road factors were based on a determination of the percentage of land required for public road development prior to development of dwelling units, which was subtracted from the total land area. Each of the residential categories then was multiplied by an appropriate road factor. These dwelling unit calculations then were multiplied by the appropriate occupancy rate to produce residential population totals for the year 2030.

Two land use categories were used to calculate seasonal population: permanent tourist facilities (PTF) and temporary tourist facilities (TTF). In Pinellas County, other land use categories containing seasonal dwelling units are the central business district, downtown business district, and general commercial land use categories. The factors used to determine units per acre for each land-use type were:

- permanent tourist facilities - 30.0 units per acre
- temporary tourist facilities - 15.0 units per acre
- central business district - 0.1 units per acre
- downtown business district - 0.1 units per acre
- general commercial - 0.1 units per acre

These factors were used to calculate the number of dwelling units, which were then multiplied by 2.16 to obtain the seasonal population. Once the 2030 population was determined, the figures for each of the 10-year periods (1990 to 2030) were calculated by subtracting the total population for 1980 from the 2030 total and multiplying the remainder by the cumulative growth curve factors for each 10-year period. The same methodology is used for calculating employment figures, using industrial, commercial, and retail employment, income, and school enrollment variables.

Pinellas County bases its future land use on its countywide Comprehensive Land Use Plan. The Plan contains information on the acreage of each land use category in the county and shows the relationships between each category and the total county area. According to the Plan, acreages used represented “ultimate land use conditions” in Pinellas County because much of the county is already developed and little overall change is expected in the future.

**Orange County**

Orange County’s resident projections were based on BEBR’s 1990 medium projections. Data from the 1980 U.S. Census was used to estimate the ratio of non-permanent to permanent population. The number of tourists was projected using a worst-case scenario of 100 percent occupancy of hotels and a persons per room figure of 2.0. Total hotel/motel rooms were projected by assuming the ratio of 1987 hotel/motel rooms to 1987 commercial employment. Employment projections were based on historic trends of the ratio of employment to population. These projections were distributed among employment sectors, which formed the basis of the projection of commercial and industrial acreage future needs.
The rate of projected population and employment growth was used to determine future land use needs for housing, commercial and industrial space, as well as a range of public and private facilities. Person per household factors were used to determine total number of residential units needed by the permanent population. The dwelling type (single-family, multi-family, etc.) was calculated based on historical percentage distributions and additional units were added to reflect normal vacancy rates and non-permanent residents. Future residential acreage needs were based on the number of units and at various planned densities.

Future commercial and industrial land use needs were estimated from employment forecasts by using an employment/acreage factor. Future recreational facility needs were estimated based on the adopted level of service standards for active and resource-based recreation sites. The transportation and utilities land use requirements were factored from population projections, except for railroad and aviation acreage, which was based on facility expansion plans. Future institutional land use needs were also based on population projections, using an institutional acreage/population ratio. The amount dedicated on the future land use map to agricultural use was related to projected agricultural employment.

In the case of Orange County, previous socio-economic projections used in major transportation planning studies, suggested that BEBR estimates of existing population in Orange County were on average 27 percent low. As a result, an additional 14,300 acres, beyond that represented within the urban services boundary was requested by the County and approved by Secretarial Decree, over objections of Department of Community Affairs staff.

**Orlando**

The City of Orlando based its resident population projections on BEBR’s 1989 medium projections for Orange County, which were proportioned among the municipalities and unincorporated areas of the county. Because Orlando’s population had comprised a decreasing share of Orange County’s population from 1970 to 1990, a trend that was expected to continue, Orlando used a 2.0 percent average decrease in share per decade to project its population as a share of Orange County’s population.

This was validated using a top/down, bottom/up approach. The projections with the top/down approach were done using a share of growth analysis (or ratio method) to determine future population based on BEBR’s projections for Orange County. The bottom/up approach was used to validate those projections using a housing and vacant land analysis, completed to determine if adequate land were available to accommodate the projected growth.

Orlando used the following formula to calculate seasonal population:

\[
\text{Seasonal Population} = (Number \text{ of Hotel Units} \times \text{Occupancy Rate}) \times \text{Persons per Unit} + \text{Homeless} + \text{Inmates} + \text{Naval Training Center Residents}
\]

This formula does not include migrant farmworkers or non-hotel seasonal residents as the existing land use inventory revealed that land uses to serve those populations do not occur within Orlando’s corporate limits.

Employment estimates were based on BEBR’s population projections, using an increasing employment to population ratio. This was projected based on an allocation of land use demand across Traffic Analysis Zones, used for transportation modelling purposes. The following methodology was used to prepare estimates of land needed to accommodate projected population.
The 1987 vacant and agricultural land for each traffic zone, the projected growth in dwelling units or floor area for each land use category, and the 1987 density or floor area ratio were entered into a spreadsheet. The likely intensity of projected future growth in each traffic zone was estimated. These estimates then were used to calculate the area needed in acres to accommodate future growth for each land use category by zone. The total acreage for all categories in each traffic zone then was calculated. The estimated acreage required to accommodate growth in each traffic zone was compared to the available vacant land in that zone. Based on this comparison, growth was adjusted as necessary.

**Land Use Classification Systems**

Rule 9J-5.006 requires local governments to address selected land uses in the land use plan and map, including residential, commercial, industrial, agricultural, recreational, conservation, educational, public buildings and grounds, other public facilities, and historic resources. The Model Future Land Use Element recommends the following classifications for residential use: Low (5 du/ac or less); Medium (5-10 du/ac); High (10-20 du/ac). Local governments are permitted to combine public buildings and grounds, other public facilities, and educational uses into one land use category and “utilize other categories of the public and private use of land.” Existing land use must include vacant or undeveloped land while future land uses are also required to include historic district boundaries, and transportation concurrency management areas.

Communities vary widely in density measures for high, medium, and low density residential use and some classify residential land uses based on structural type rather than density. The existing land use map for the City of Ft. Pierce uses single-family and multi-family classes based on structure, such as single-family, duplex, and triplex, while their future residential land use is based on densities. The City of Stuart combines both approaches of structural type and density with low density residential and multi-family residential land uses. Stuart describes that multifamily is “related to living quarters with three or more units per building.” Maximum density usually 10 units per acre.” Lee County uses broad categories, such as “suburban, outlying suburban, and intensive” and has at least four separate yet overlapping classifications for interchange areas.

Communities range from one to as many as four commercial land use classes, and there is substantial overlap between commercial, office, and industrial land use categories. Some land use plans fail to adequately describe which uses are included within a land use class and some define a land use by existing zoning guidelines. Overly generalized land use classifications or too many individual land use classifications make it extremely difficult to decipher land use trends.

A standardized classification system would go far in improving current planning practice. Such a system would pose many advantages. It would simplify communication between planners and the public; offer opportunities for comparative studies; make it easier to determine consistency of planning efforts across jurisdictions; and allow for more systematic research into regional urbanization trends. A standardized land use classification system would not limit the type of land uses a community could use. Rather, the classification system would reflect the broad range of possible land use categories and jurisdictions would select from the list depending upon their unique circumstances.
A standardized local land use classification system could be based on the Standard Industrial Classification (SIC) system developed by the U.S. Office of Management and Budget. The SIC system uses ten broad categories to group land use. In turn, each category is then subdivided to render greater detail or aggregated for a regional view. Many planning agencies have adopted or developed a similar approach to the Standard Industrial Classification System.

**Land Use Ratios**

In creating a future land use plan, the location and amount of various land uses should be estimated not only in absolute terms, but also in relation to other land uses. A look at existing land use ratios is an indicator of past trends and helpful for identifying future needs. To better represent the urbanized portion of a city, land use ratios may be calculated as a proportion of developed land, excluding agriculture and vacant land. Surveys of large and small cities nationwide show that suburbanization since World War II has increased residential land use ratios.\(^1\) A comparison of land use ratios in 1955 and 1992 in the table below reflect changes in development patterns.

Nationwide, land use ratio comparisons over time for both large and small cities also show an increase in the proportion of

<table>
<thead>
<tr>
<th>Urban Population</th>
<th>Under 100,000</th>
<th>Over 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Land Use</td>
<td>42%</td>
<td>52%</td>
</tr>
<tr>
<td>Commercial Land Use</td>
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<td>10%</td>
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<tr>
<td>Industrial Land Use</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Public Land Use</td>
<td>47%</td>
<td>31%</td>
</tr>
</tbody>
</table>

*Source: C. Harris, "Bringing Land Use Ratios Into The 80's," PAS Memo, American Planning Association, August 1992.*

Commercial land use, particularly due to land-intensive strip development and regional malls. The automobile parking needs of these types of commercial development can double the total land requirement. Commercial land use has also increased due to the trend toward low density office parks outside the downtowns. After residential land use, transportation and utility uses have consistently covered the second highest amount of acreage in a city, during the time periods for which the nationwide surveys were undertaken.\(^2\)

**Land use imbalance and transportation demand**

Urban core areas, such as the Stuart or Orlando, are characterized by a relatively balanced mix of commercial, residential, industrial, and institutional or other land uses. Newer communities on the urban or suburban fringe, however, are characterized by a much higher relative proportion of residential land use to commercial, institutional, and other land uses. This describes the trend toward “bedroom” communities (see Figure 1).

Large single-use land areas create special problems for transportation. Typical suburban development consists of single-family residential suburbs served by commercial corridors and employment activity centers. This trend in development patterns increases dependence on the automobile--funneling more residents onto arterials with a corresponding increase in traffic congestion.

At the extreme are communities in Florida that are almost entirely single family residential. The City of Port St. Lucie, for example, is a 78-square-mile residential plat laid out by General Development Corporation in the 1960s. The land was subdivided into 10,000 square foot lots and then mass marketed across the country. Platted communities like Port St. Lucie, are dramatic examples
of the traffic problems created by large single use land areas. They also represent the problems inherent with inadequate review of development proposals and counter the argument that development decisions should be entirely market driven.

Eighty-nine percent of Port St. Lucie's land area is devoted to single-family residential use, at a density of about four units per acre. Less than six percent of Boulevard and Prima Vista Boulevard--and no direct north/south arterial. Residents travel along the east-west arterials onto US 1 to travel to work or shop. Commercial development is focused along US 1 and increasingly along Port St. Lucie Boulevard, with both roadways suffering from severe traffic congestion.

Although the City's comprehensive plan includes a variety of policies and strategies

![Figure 1](COMPARISON OF EXISTING LAND USE RATIOS)

(Source: City of Cape Coral Comprehensive Plan, October 1992; City of Stuart Comprehensive Plan, December 1989.)

the community is reserved for commercial use and even less for industrial or institutional uses. In 1980, it housed only 15,000 people. But as a primary source of affordable housing in the region, Port St. Lucie's population has exploded in the past decade. The result is a community which at 30 percent build-out has a population of 65,000 residents, with less than six percent of its land area devoted to commercial and office use. Port St. Lucie will accommodate an estimated 172,000 persons by 2015.

The plat of Port St. Lucie includes only two east west arterials--Port St. Lucie aimed at land use conversion, the existing platted lots are already vested. This constraint has been reflected in future land use projections that show a continuation of existing land use ratios into the future (see Table 5). A mixed use DRI was proposed on one of the city's few large vacant parcels to the north, but it was not designed to provide a functional mix of uses that could serve as a downtown or service center for the city population.

In Port St. Lucie, residential development is not subject to concurrency because the lots were already vested. State growth
management laws, however, require that the transportation system maintain a reasonable LOS. To accomplish this Port St. Lucie Boulevard is being widened from 4 to six lanes—the maximum available right of way. The City’s total transportation needs are overwhelming, consuming a large portion of the region’s transportation resources. County planners estimate that over $12 million have been spent on Port St. Lucie since 1988, capacity and building new bridges and corridors will help address problems created by the poorly designed street system. But these solutions are not sufficient to solve the congestion problems of platted communities over the long term because they fail to address the related causes of congestion—a dramatic land use imbalance, automobile dependent development patterns, and the absence of a commercial core. Port St. Lucie’s east/west arterials are already experiencing development pressures that will, without strict access controls, lead to functional degradation of those roadways.

The alternative is to revamp the local regulatory framework to foster access to goods and services within the community and restrict access connections along existing arterials to preserve regional mobility. In turn, land use strategies would include encouraging a complementary mix of uses; consolidating parcels where feasible to permit commercial and office development; and, if possible, retrofitting the community with an urban core or service center. Mixed use is not sufficient. There must be a functional relationship between land uses if efficient transportation systems are to be achieved.

Retrofitting further requires an urban design plan and incorporation of urban design principles into neighborhood planning and site plan review. This will assure that land use or density changes will enhance rather than detract from neighborhood quality. Because it is only now developing and is served by a grid street system, the potential for retrofitting Lehigh Acres is especially good. Such land use and economic development strategies would complement mobility objectives and enhance the quality of the future built environment.

### Table 5

**CITY OF PORT ST. LUCIE**

**FUTURE LAND USE NEEDS, 2015**

<table>
<thead>
<tr>
<th></th>
<th>1988</th>
<th>Percent</th>
<th>2015</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Permanent Population</td>
<td>43,345</td>
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<tr>
<td>Total Housing Units</td>
<td>20,881</td>
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<td>Land Use Needs (acres)</td>
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</tr>
<tr>
<td>Residential (4 du/acre)</td>
<td>5,220</td>
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<td>21,182</td>
<td>89.0%</td>
</tr>
<tr>
<td>Commercial</td>
<td>351</td>
<td>6.0%</td>
<td>1,422</td>
<td>6.0%</td>
</tr>
<tr>
<td>Industrial</td>
<td>150</td>
<td>2.6%</td>
<td>610</td>
<td>2.5%</td>
</tr>
<tr>
<td>Institutional</td>
<td>140</td>
<td>2.4%</td>
<td>568</td>
<td>2.4%</td>
</tr>
<tr>
<td>Totals</td>
<td>5,861</td>
<td>100.0%</td>
<td>23,782</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Source: City of Port St. Lucie Comprehensive Plan, June 1990, p. 14.*
Conclusions
Many factors, both methodological and philosophical, influence determinations of future land use needs. Clearly, Florida communities represent a variety of planning circumstances, particularly with regard to anticipating future growth. Orange County experiences a mass seasonal influx of population due to international tourist attractions and growing convention activity. Seasonal population increases affect the land use needs of many coastal counties as well. Other communities—like Lee County or Port St. Lucie—must plan under the constraint of huge, poorly designed residential plats already vested for development. The Miami-Dade metropolitan area faces tremendous uncertainty in evaluating socio-demographic change, given continued immigration, Census undercounts, and often inaccurate ratios of persons per household across ethnic groups.

The basic concern over population projections is accuracy. Rule 9J-5 requires local governments to demonstrate that future land use plans are financially feasible and to use professionally accepted methodologies in projecting future population. The Department of Community Affairs has reviewed local population projection methods for professional acceptability in determining compliance with Chapter 163, F.S. Our review verifies that local governments have adhered to professionally accepted methodologies in projecting future population.

However, socio-economic forecasting depends heavily upon the assumption that the future will reflect historical trends. But the future may depart from those trends. The degree of accuracy in predicting the magnitude and location of seasonal residents will affect estimates of the corresponding demand on public services and infrastructure. In turn, communities must maintain a tenuous balance between the transportation capacity needed to serve the peak population and the capacity needed during the off-peak season.

Due to this uncertainty, decisions regarding future population forecasts frequently enter the political realm.

Reaching agreement as to an urban area’s population forecast is politically sensitive, because anticipated growth rates drive decisions regarding transportation expenditures and the timing of transportation improvements. The risks of anticipating too much growth are premature overexpenditure, inefficiencies in service provision, and fewer resources for more pressing community needs. The risks of anticipating too little growth could include underinvestment in transportation improvements, increased congestion, violation of level of service standards, and risk of development moratoria.

Political debates also center on the effect of growth rates and growth management requirements on local and State economic development goals. Many local governments prefer to err on the side of anticipating too much growth, rather than too little. Higher anticipated population provides greater flexibility in future land use determinations and may mean higher funding levels in terms of State and federal revenue sharing programs.

Although flexibility is essential for planning purposes, allocating too much land for development can distort reasonable projections of future facility needs and encourage haphazard development patterns. A recession and a corresponding slowdown of real estate activity has caused some DRI projects, or their future phases, to be put on hold indefinitely. An excess of vested, yet outstanding, development rights could prematurely inflate projected transportation demand if not accounted for in growth scenarios.
The potential for overprojection of transportation facility needs makes it essential that inputs to transportation demand forecasting models include assumptions based upon reasonable market absorption. For example, after recognizing an excess of vested (DRI) development rights in Escambia and Bay Counties in relation to actual growth trends, the area MPO scaled back its DRI projections to provide greater accuracy in determining transportation needs.

Contemporary planning and growth management programs raise another consideration. Although socio-economic and future land use projections are helpful in evaluating past and current trends, less emphasis is being placed on such projections in planning practice than was previously true. The traditional "rational" approach to planning has been gradually reinvented to harness the political and discretionary nature of community development decisions.

The reasons for this are many. First, projections are based on past trends and assumptions that are subject to tremendous uncertainty. If the plan is too reliant on this method and projections are flawed, then it would require substantial and costly revision. Second, communities that wish to diverge from past trends should not depend on this method to determine future development patterns. The City of Orlando, for example, has indicated a desire to accommodate less growth than allocated under BEBR projections. Third, contemporary planning has become increasingly participatory as communities strive to establish a common vision of how they want to grow.

Growth management influences the rate, timing, quality, and location of land development based on planning goals and a locally preferred future. A local planning and growth management program may represent departure from past trends and would have some bearing upon assumptions incorporated into future population and land use projections. Thus, in contemporary planning, socio-economic and land use projections are viewed more "as an early warning, monitoring, and planning tool, rather than the central foundation of the plan."

It is also recognized, in the discussion of land use ratios, that the larger challenge of managing orderly and efficient growth cannot be met solely by addressing problems relating to the amount of land allocated, but also must address the land use mix. Communities should evaluate land use needs of planning subareas, and provide a mix of land uses and services needed to create functional, livable neighborhoods. This requires additional attention to flexible zoning and urban design initiatives that have proven highly successful in creating balanced neighborhoods where residents can "live, shop, work and play."

An issue that causes difficulty in evaluating land use trends and future land use needs among neighboring communities, however, is wide variation in land use classification systems. A standardized land use classification system would enable communities to evaluate growth trends locally and regionally and determine consistency of planning efforts. A "common language" in addressing land use issues would improve communication between communities on these issues and make land use plans more comprehensible. Such a system would not limit the ability of communities to creatively plan for future land use needs or to establish mixed use districts. It would reflect the broad range of possible land use categories, including aggregations of uses, and jurisdictions would select from the list depending upon their unique circumstances.
Determining Transportation Needs

This chapter reviews the current transportation planning process and new requirements for metropolitan transportation planning under the Intermodal Surface Transportation Efficiency Act of 1991. It begins with an overview of new state planning requirements and their relationship to the metropolitan planning process and concludes with an analysis of the adequacy of traditional modeling methods for determining future transportation needs.

**State Transportation Planning**

ISTEA provides the first federal mandate for statewide transportation planning—a process modeled after that for metropolitan planning organizations. State Departments of Transportation (DOTs) must prepare a policy plan, long range transportation plan, and Statewide Transportation Improvement Program. State long range plans and transportation improvement programs must be consistent and coordinated with each other and with metropolitan transportation plans and improvements programs. They must also cover a broader range of transportation modes and advance connectivity between those modes.

Planning requirements emphasize the role of the State in assuring coordination and consistency of transportation planning and programming across the various transportation, land use planning, and environmental permitting entities—including those of bordering states that share a metropolitan area. States must address 23 factors in the planning process, modeled after those for MPOs, including acquisition and preservation of rights-of-way for future transportation corridors, strategies for incorporating pedestrian and bicycle facilities, and methods to reduce single occupant motor vehicle travel (see Table 6).

States must also address the long range needs of the State transportation system and pursue innovative financing, such as value capture pricing, tolls, and congestion pricing in addressing those needs. New transportation management systems must be developed to assist with needs determination and improve management and operation of existing facilities. Previously, state long range plans represented a 20-year set of investment priorities. Now they must be more strategic and evaluate alternative long range strategies for addressing needs. The state long range plan must be completed and approved by the Governor by January 1, 1995.

ISTEA calls for greater public participation in the transportation planning and programming process at both the state and regional level. Citizens, affected public agencies, representatives of transportation agency employees, private transportation providers, and other interested parties must be provided a reasonable opportunity to comment on long range plans and TIPs prior to approval. Proposed rules, currently being promulgated by FHWA and FTA, would require states and MPOs to allow early public involvement in planning, programming, and updating efforts. MPOs would be required to develop and adopt public involvement procedures that assure “meaningful public participation” and provide a minimum 45-day period for public comment before the procedures are formally adopted.
A shift in transportation decision authority has occurred in metropolitan areas of 200,000 persons or more. In a move designed to increase local leverage and strengthen regional coordination, ISTE A transferred authority for priority transportation investments from the state DOT to the MPO (Sec. 134 [j]). Although ISTE A calls for greater regional autonomy, state DOTs will still have considerable leverage. State transportation officials have final say over use of state matching funds, will prioritize projects statewide, and are ultimately responsible for developing and implementing state projects. Urban projects on the National Highway System or pursuant to the bridge and Interstate maintenance programs remain under their purview. The FDOT Secretary is required to review and certify MPOs in metropolitan areas of more than 200,000 persons (now called Transportation Management Areas) for conformance with ISTE A’s planning and programming requirements once every three years. If the MPO is not certified, FDOT can withhold all or a portion of their appropriation under the Act.

Florida is fortunate in that Florida DOT has been carrying out many of the ISTE A’s requirements already. Notwithstanding, the 1993 legislative session passed a Florida ISTE A that brings Florida into conformance with federal ISTE A.

The Florida Transportation Plan
The Florida Transportation Plan (FTP) is the statewide comprehensive transportation plan developed by the Florida Department of Transportation. The plan historically has served as the transportation portion of the State Comprehensive Plan and has consisted of the following elements: systematic planning process, transportation policies and guidelines, transportation modes, trans-

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### Table 6

**STATE AND METROPOLITAN PLANNING FACTORS UNDER ISTE A**

<table>
<thead>
<tr>
<th>Factors to be Considered in Metropolitan Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently.</td>
</tr>
<tr>
<td>2. The consistency of transportation planning with applicable federal, State, and local energy conservation programs, goals, and objectives.</td>
</tr>
<tr>
<td>3. The need to relieve congestion and prevent congestion from occurring where it does not yet occur.</td>
</tr>
<tr>
<td>4. The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use and development plans.</td>
</tr>
<tr>
<td>5. The programming of expenditures on transportation enhancement activities.</td>
</tr>
<tr>
<td>6. The effects of all transportation projects to be undertaken in the metropolitan area, without regard to whether such projects are publicly funded.</td>
</tr>
<tr>
<td>7. International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations.</td>
</tr>
<tr>
<td>8. The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area.</td>
</tr>
<tr>
<td>9. The transportation needs identified through use of the management systems required by ISTE A.</td>
</tr>
<tr>
<td>10. Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss.</td>
</tr>
<tr>
<td>11. Methods to enhance the efficient movement of freight.</td>
</tr>
<tr>
<td>12. The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement.</td>
</tr>
<tr>
<td>13. The overall social, economic, energy, and environmental effects of transportation decisions.</td>
</tr>
<tr>
<td>14. Methods to expand and enhance transit services and to increase the use of such services.</td>
</tr>
<tr>
<td>15. Capital investment that would result in increased security in transit systems.</td>
</tr>
</tbody>
</table>
portation designation and coordination, performance monitoring, and five-year program and resource plan.

During 1993, the Florida Transportation Plan will be revamped to coordinate with the new legislative requirements of Florida ISTEA and the ELMS-III Act. The ELMS-III Act calls for the plan to serve as one of the base documents for the newly developed growth management portion of the state comprehensive plan. ISTEA modified the format and content of the FTP. It must consider the needs of the entire state transportation system, while examining all modes to meet such needs and providing for the interconnection of modes in a comprehensive intermodal transportation system.

The FTP must now address the twenty factors identified in ISTEA including:

- process for determining transportation needs of non-metropolitan areas that includes consultation with local elected officials;
- consistency of the plan with comprehensive regional policy plans, MPO plans, and approved local government comprehensive plans so as to contribute to the management of orderly and coordinated community development;
- the effect of transportation decisions on land use and land development, including the need for consistency between transportation decision making and the provisions of all applicable

Table 6 (continued)

<table>
<thead>
<tr>
<th>Factors to be Considered in State Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The results of the ISTEA management systems.</td>
</tr>
<tr>
<td>2. Any federal, State, or local energy goals, objectives, programs or requirements.</td>
</tr>
<tr>
<td>3. Strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects where appropriate throughout the State.</td>
</tr>
<tr>
<td>4. International border crossings, access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation and scenic areas, monuments and historic sites, and military installations.</td>
</tr>
<tr>
<td>5. The transportation needs of nonmetropolitan areas through a process that includes consultation with local elected officials with jurisdiction over transportation.</td>
</tr>
<tr>
<td>6. Any metropolitan area plan.</td>
</tr>
<tr>
<td>7. Connectivity between metropolitan areas within the State and with any metropolitan areas in other States.</td>
</tr>
<tr>
<td>8. Recreational travel and tourism.</td>
</tr>
<tr>
<td>9. Any State plan developed pursuant to the Federal Water Pollution Control Act.</td>
</tr>
<tr>
<td>10. Transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities.</td>
</tr>
<tr>
<td>11. The overall social, economic, energy, and environmental effects of transportation decisions.</td>
</tr>
<tr>
<td>12. Methods to reduce traffic congestion and prevent it from developing in areas where it does not yet occur, including methods which reduce motor vehicle travel, particularly single-occupant motor vehicle travel.</td>
</tr>
<tr>
<td>13. Methods to expand and enhance transit services and to increase the use of such services.</td>
</tr>
<tr>
<td>14. The effect of transportation decision on land use and land development, including the need for consistency between transportation decision making and the provisions of all applicable short-range and long-range land use and development plans.</td>
</tr>
<tr>
<td>15. The transportation needs identified through use of management systems required by ISTEA.</td>
</tr>
<tr>
<td>16. Where appropriate, the use of innovative mechanisms for financing projects, including value capture pricing, tolls, and congestion pricing.</td>
</tr>
<tr>
<td>17. Preservation of rights-of-way for future transportation project construction, including identification of unused rights-of-way that may be needed for future corridors, and identification of those corridors for which action is most needed to prevent destruction or loss.</td>
</tr>
<tr>
<td>18. The state transportation system's long-range needs.</td>
</tr>
<tr>
<td>19. Methods to enhance the efficient movement of commercial motor vehicles.</td>
</tr>
<tr>
<td>20. Life-cycle costs in the design and engineering of bridges, tunnels, or pavement strategies.</td>
</tr>
<tr>
<td>21. Coordination of metropolitan transportation plans and programs with the statewide transportation plans and programs.</td>
</tr>
<tr>
<td>22. Investment strategies to improve adjoining State and local roads that support rural economic growth and tourism development, federal resource management, and multipurpose land management practices.</td>
</tr>
<tr>
<td>23. The concerns of Indian tribal governments having jurisdiction over lands within the boundaries of the state.</td>
</tr>
</tbody>
</table>

Transportation and Growth Management
short-range and long-range land use and development plans (see Table 6).

Florida ISTEA provides guidelines for increased public participation in developing the Florida Transportation Plan. The public is provided opportunities to comment on the FTP, specific project plans, and proposed project design through a public hearing process. The hearing is required to include a presentation and discussion of 23 considerations the FTP must address.

**State Transportation Improvement Program (STIP)**

The Statewide Transportation Improvement Program required by ISTEA must have at least a three-year horizon (or longer upon discretion of the state) and reflect projects identified by MPOs, as well as projects of rural or statewide significance. For nonattainment areas, the STIP must conform to the State Implementation Plan for carrying out the requirements of the Clean Air Act Amendments of 1990.

The Federal Highway Administration and Federal Transit Administration--along with the Environmental Protection Agency where air quality issues are concerned--are responsible for ensuring that states and MPOs live up to ISTEA’s new requirements. If a state or MPO fails to carry out air quality requirements in the SIP, the Clean Air Act Amendments of 1990 authorized EPA to withhold all or a portion of its highway monies.

The STIP must be developed by FDOT in cooperation with MPOs. The FHWA/FTA Interim Guidance on Statewide Planning Requirements states that “it is expected that the Transportation Improvement Program for each metropolitan area or part thereof within each state will be incorporated, either directly or by reference, into the STIP ultimately approved by the State and the Secretary.”

To be included in the STIP, projects must be: proposed for federal or state funding; consistent with long-range component of the FTP; consistent with the State Implementation Plan for air quality in designated air quality nonattainment areas; and anticipated to be fully funded within the time period contemplated for project completion.

Projects included in the STIP will be selected as follows:

- projects undertaken in areas of less than 50,000 population and projects undertaken in areas on the National Highway System or pursuant to the bridge and interstate maintenance programs shall be selected by the state in cooperation with the affected local officials;

- projects undertaken with federal or state funding in areas with a population between 50,000 and 200,000, shall be selected by FDOT in cooperation with the MPO, in conformance with the Transportation Improvement Program for the area;

- projects carried out within the boundaries of the transportation management area, for areas over 200,000 population with federal or state participation shall be selected by the MPO, in consultation with the state, in conformance with the Transportation Improvement Program; and

- projects undertaken within the boundaries of a TMA on the National Highway System or pursuant to bridge and interstate maintenance programs shall be selected by the state in cooperation with the MPO.

During development of project plans, FDOT is required to hold at least one public hearing prior to facility selection,
corridor or site selection, and design proposal selection. This hearing is established to allow interested persons to effectively participate in transportation planning, site and route selection, and location and design selection. Finally, prior to conducting a design hearing, affected property owners must be notified. Affected property owners include those whose property is within 300 feet of the center line of the proposed facility and those whose safety or physical, economic and social environments will be affected.

**The Florida intrastate highway system**

The Florida Intrastate Highway System (FIHS) is the statewide system of limited access and controlled access facilities that allow for high-speed and high-volume traffic movement within the state (Sec. 338.001 F.S.). This system was designated by FDOT and adopted by the legislature in an effort to preserve regional and statewide transportation mobility. The FIHS program involves development and improvement of a system of highways with strict access controls. Process, Criteria, and Standards for the FIHS Plan emphasize the need to coordinate with local governments on managing access to those portions of the FIHS that are not limited access facilities.

The Department of Transportation is charged with making the necessary system improvements and entering into formal agreements with local governments for coordinating land use planning and regulation with state access standards for controlled access facilities. All segments are planned to be brought into compliance with system criteria and standards within a 20-year period. This deadline, however, may prove unworkable given a substantial shortfall in projected funds available to the FDOT to bring the system up to FIHS standards within 20 years. Thus, finding adequate funding to maintain and improve Florida's priority statewide system of highways will remain an ongoing challenge for FDOT and the legislature.

**The new interstate highway policy**

In November 1991, the Florida Department of Transportation established new policies to direct the development of the Florida Interstate Highway System. The new FDOT policy does much to support and advance the principles of ISTEA. Under the new policy, all modifications to the Interstate Highway System must be consistent with state goals and objectives aimed at reducing the environmental impact of the system, increasing efficiency, promoting public transit and carpooling, and allowing space between selected corridors for high speed rail. All Highway Master Plans must be revised to reflect policy changes and new Master Plans will be developed for all remaining sections of the system.

To increase efficiency, the Interstate system will be expanded to six lanes where operating conditions do not meet FDOT minimum LOS standards. Future growth of the system, was restricted, however, to a maximum of ten lanes and the construction or modification of interchanges was prohibited unless approved by an Interchange Justification Report. In urbanized areas with populations greater than 200,000, the updated Master Plans will include four physically separated, exclusive lanes (two in each direction) for through traffic, public transit, and other high occupancy vehicles.

**Metropolitan Transportation Planning**

Metropolitan Planning Organizations are responsible for carrying out long range transportation planning and setting transportation programming priorities for metropolitan areas. MPOs were created in 1975 to carry out the urban transportation planning mandates of the Federal
Highway Administration and the Urban Mass Transit Administration (now the Federal Transit Administration or FTA). They were to be established in all urbanized areas of 50,000 population or more and were to work in cooperation with the State DOT and transit operators. The transportation planning process was to be "continuing, cooperative, and comprehensive" (also known as 3-C) and MPOs were to provide a "forum for cooperative decision making by principal elected officials of general purpose local government."

ISTEA retains much of the flavor of the original MPO legislation, with some modifications. Coordination requirements, bicycle and pedestrian planning, transit alternatives, transportation demand management, public participation—all have been part of the MPO process since 1975. The new planning requirements include a much stronger intermodal emphasis, the carrot of more money and funding flexibility, the stick of required conformance with clean air standards, and greater recognition of the needs of commercial transportation and the efficient movement of freight.

ISTEA requires consideration of 15 interrelated factors by MPOs in preparing the long range transportation plan—
including land use, intermodal connectivity, and enhanced transit service (see Table 6). The intermodal emphasis is aimed at achieving better coordination and consistency of efforts across the many agencies and organizations involved in transportation planning and service provision. Long range plans must also address the effect of transportation policy decisions on land use and development and demonstrate consistency with all applicable land use and development plans.

Metropolitan areas of over 200,000 persons—and others upon request of the Governor—are designated as Transportation Management Areas. Thirteen of Florida's 25 MPOs lie in TMAs (see Figure 2). Metropolitan planning requirements for TMAs include development of a congestion management plan and congestion management system that tracks the effect of transportation demand reduction and operational management strategies on traffic congestion. TMAs in designated nonattainment areas must also meet special requirements of the Clean Air Act Amendments of 1990 (see Figure 3). Other less urbanized areas are permitted to use abbreviated planning procedures, depending on the complexity of their transportation problems.

Figure 3
DESIGNATED NONATTAINMENT AREAS

The new requirements are designed to discourage the traditional reliance on constructing new facilities to solve traffic congestion. Instead, MPOs must emphasize preserving the existing transportation network through transportation systems management techniques that improve system efficiency and transportation demand management strategies to reduce the number of travelers. Plans must also include methods to expand and enhance transit service and encourage transit use—including transit-oriented land use and design strategies.

**Management systems**

Better mobility planning means accommodating multimodal alternatives in transportation planning efforts. To assist with this effort, ISTEA requires state DOTs and MPOs to cooperate on development and implementation of six new management systems. Reliable systems must be developed to manage and monitor federal-aid highway pavement maintenance, bridge maintenance, highway safety, traffic congestion, public transportation facilities and equipment, and intermodal transportation facilities and systems. Proposed rules call for states to certify that they are implementing the six management systems by January 1, 1995.

The congestion management and intermodal management systems are the newest additions to transportation planning. ISTEA states that the intermodal management system must provide for improvement and integration of “all of a State’s transportation systems and shall include methods of achieving the optimum yield from such systems, increasing productivity in the State, increasing use of advanced technologies, and encourage the use of innovative marketing techniques, such as just-in-time deliveries” (Sec. 303[e]).

Draft rules for management and monitoring systems issued by USDOT in March of 1993, advise that an effective intermodal system would address the following:

- **connections**—the convenient, rapid, efficient and safe transfer of people and goods among modes;
- **choices**—a greater variety of modal opportunities for travelers to choose from; and
- **coordination and cooperation**—collaborative efforts between planners, users, and transit providers to resolve travel demand.

The draft rules call for congestion management systems to “identify areas where congestion occurs or may occur, identify the causes of the congestion, evaluate strategies for managing congestion and enhancing mobility, and develop a plan for implementation of the most effective strategies.”

Congestion management systems are to address a wide variety of traditional and non-traditional strategies, including transportation demand management, operations improvements, measures to support transit, congestion pricing, land use management and activity center strategies, access management techniques, incident management strategies, and Intelligent Vehicle-Highway Systems (IVHS) applications. Florida ISTEA requires each MPO to prepare a congestion management system and cooperate with FDOT on preparation of all other systems.

**Metropolitan long range planning**

Each MPO is responsible for preparing a comprehensive transportation plan that considers long range goals as well as transportation system management measures. ISTEA modified the comprehensive transportation plan, now the long range plan, and provided specific guidelines concerning its development and
The MPO long range plan must be consistent, to the maximum extent feasible, with future land use elements and the goals, objectives, and policies of the approved local government comprehensive plans. In turn, local governments must consider the MPO long-range plan in the development of the transportation elements of the local government comprehensive plans.

At a minimum, the MPO long range plan must:

- identify transportation facilities, including major roadways, airports, seaports, commuter rail systems, transit systems, and intermodal or multimodal terminals that function as an integrated metropolitan transportation system, with special emphasis on transportation facilities that serve national, statewide, or regional functions;

- include a financial plan that demonstrates how the plan can be implemented and recommends innovative financing techniques;

- assess capital investment and other measures necessary to ensure the preservation of existing metropolitan transportation systems and make the most efficient use of existing transportation facilities;

- indicate proposed transportation enhancement activities.

- nonattainment areas must also plan in accordance with the State Implementation Plan for air quality developed pursuant to the Clean Air Act Amendments.

MPOs must assist FDOT with mapping transportation planning boundaries and in performing duties relating to access management, functional classification, and data collection. MPOs must also enter into the following agreements with FDOT:

- an agreement clearly establishing the cooperative relationship essential to accomplishing the transportation planning requirements of state and federal law;

- an agreement with the metropolitan and regional intergovernmental coordination and review agencies serving the metropolitan areas, specifying how activities will be coordinated and how transportation planning and programming will be part of the comprehensive planned development of the area;

- an agreement with operators of public transportation systems, including transit, commuter rail, airports, and seaports, describing how activities will be coordinated and integrated into the comprehensive planned development of the metropolitan area;

- any other agreements required by State or federal law or necessary to accomplish MPO functions.

The MPO's Technical Advisory Committee must include planners, engineers, representatives of aviation authorities, port authorities, and public transit authorities or representatives of aviation departments, seaport departments and public transit departments of municipal or county governments; the school superintendent within each county; and other appropriate representatives of local governments.

Each MPO must also appoint a Citizens Advisory Committee. The membership must reflect a "broad cross section of local residents with an interest in the development of an efficient, safe, and cost-effective transportation system." Minorities, the elderly, and the handicapped must be adequately represented. MPOs
may, upon approval of the department and applicable federal governmental agency, adopt an alternative program or mechanism to ensure citizen involvement in the transportation planning process.

Transportation Improvement Programs
MPOs are responsible for creating and annually updating a Transportation Improvement Program that consists of improvements recommended from the long range transportation plan. This includes federally-aided transportation facilities and improvements as well as other transportation facilities and improvements to be funded from the State Transportation Trust Fund. The TIP must be consistent, to the maximum extent feasible, with local government comprehensive plans in the region. Projects in the TIP can only be removed or rescheduled in subsequent TIPs by the joint action of the MPO and FDOT.

Each TIP is developed in cooperation with the state and affected public transportation operators and must now include the following:

- a priority list of projects and project phases to be funded with State or federal funds;
- a list of projects for funding under the Federal Transit Act;
- a financial plan that demonstrates how the TIP will be carried out;
- grouping of projects and project phases of similar urgency into appropriate staging periods;
- examples of specific projects which further the long range plan and indication of how the TIP relates to the long-range plan;
- any inconsistencies of projects or project phases with local government comprehensive plans; and
- indicate how improvements are consistent with seaport and airport master plans and public transit development plans.

The MPO must also develop a Unified Planning Work Program (UPWP) that documents the planning budget and planning activities undertaken during the year. ISTEA states that the UPWP should be developed in cooperation with FDOT and public transportation providers.

On the local level the Traffic Circulation and Mass Transit Elements of local government comprehensive plans must consider the adopted level of service standards, improvements, expansions and new facilities planned in the FDOT Five-Year Work Program and the MPO plans (9-1.007). Goals and objectives of each plan must coordinate with the MPO plans, any public transportation authority, any appropriate resource planning and management plan, and FDOT’s Five-Year Work Program.

Review of the local comprehensive plan is conducted by the FDOT’s District Office for Planning and Programming. Among other things, the review will examine intergovernmental coordination to ensure coordination with all appropriate adopted plans and policies, with specific attention given to consistency between the comprehensive plan, MPO plans, and FDOT’s plans and work program.

The Modeling Process
The urban transportation planning process uses a series of sequential models to describe the interactions between land use, the transportation system, and travel characteristics. The State of Florida has standardized this process through its widely-distributed FSUTMS models. The sequential transportation planning models are summarized in Table 7.
The process begins by dividing the planning area into traffic analysis zones and estimating various socio-economic activity measures for each zone, such as population, employment, and other socio-economic indicators. Based on land use and socio-economic characteristics, the trip generation model estimates the number of trips produced by or attracted to each zone. Generally this is done for a 24-hour period.

Based on productions and attractions in each zone and characteristics of the transportation system, the trip distribution model estimates the number of trips from each zone to all other zones. Modal split involves the division of trips between each pair of zones into modal alternatives—primarily the proportion travelling by automobile versus public transportation. Traffic assignment models specify the particular transportation links utilized between each set of zones and the total number of trips on each link. The models are normally applied on a 24-hour basis, with various “rules of thumb” applied to transform the 24-hour volumes to peak period directional volumes.

This same procedure is used for all zones for trips to all other zones. By examining the total network loadings of the traffic assignment process, we can compare traffic demand with the traffic-carrying capacity of each link. The results of these models are then compared to the base year in which land use and traffic counts are known. By comparing model output with known traffic counts, adjustments can be made to various submodels until the output accurately reflects ground traffic counts. This process is known as calibration and validation.

After models have been calibrated using base year data, they are applied with forecast year land use and transportation system characteristics with the assumption that basic trip characteristics do not change over the forecast period. The quality of model results is dependent upon the reasonableness of the socio-economic activity measures and land use assumptions forecast in the future year.

The transportation planning process described above is used by MPOs in Florida and across the nation. It utilizes a methodology that originated in the early 1960s and has changed only modestly in the last 30 years. Virtually all MPOs apply this sequence of models based on economic and land use characteristics forecasted for the study area in some future year—generally 20 years into the future. A long range transportation plan is produced, based on future land use scenario.

The plan is then staged, so that early implementation projects are timed for consistency with the long range plan.

**Validity of underlying assumptions**

Computer-based transportation planning models were initially created in the 1950s and 1960s for application to long range regional transportation planning problems. Over the years, a number of refinements have been made. The assumptions built into the models are reasonable but imprecise characterizations of reality. Some underlying assumptions of transportation planning models are that:

- trip generation is related to land use characteristics;

| Table 7 |
|-----------------|---------------------------------|
| **SEQUENTIAL TRANSPORTATION PROCESS** | **Location and intensity of development** |
| **Land Use** | **Trip Generation** | How many trips are made? |
| **Trip Distribution** | ... to where? |
| **Modal Split** | ...by what means? |
| **Assignment** | ...by what path? |
- trip linkages between zones are directly related to the levels of activity in those zones;
- trip linkages between zones are inversely related to the difficulty of getting between zones; and
- trips between zones generally take the path of least impedance.

Each of these assumptions, as generalized statements, are well-tested and demonstrable. Yet travel behavior is extremely complex and the combination of these factors, as described by mathematical relationships, explains only a portion of real world travel behavior. Models must therefore be calibrated to real world conditions by applying adjustment factors. Most frequently, adjustment factors take the form of time penalties applied to particular links to correct for modeled traffic assignments greater than ground counts.

Alternatively, travel speeds specified in the model may be increased if the model is underassigning traffic to a particular link. The result is often a traffic volume assignment that has been forced to correspond with ground counts, but a network description that fails to reflect the condition of the facility. Furthermore, these adjustments often lack any theoretical basis.

The ultimate test of the models is base year traffic assignment results. To what extent do traffic assignments from the model reflect known traffic volumes, based on known land use activities? Even after the application of heuristic adjustment factors, results can be imprecise. In one development impact study conducted by CUTR, comparisons of actual traffic on a network with that calibrated and validated by local government staff revealed the following discrepancies (actual vs. model): 23,600 vs. 32,400; 21,900 vs. 32,000; 26,200 vs. 18,200; and 21,200 vs. 13,900. These comparisons are for a base year condition in which there was complete knowledge of land use and traffic conditions. It is difficult to argue that the models give accurate forecasts of future conditions when traffic assignments for known conditions reflect major errors, even after adjustment.

These examples are by no means isolated. The calibration standards generally used for these models accept high levels of error. Standards used in Florida call for assigned vehicle miles traveled (VMT) and vehicle hours traveled (VHT) to be within five percent of actual counts, on an areawide basis. Obviously, this standard can be met while having enormous variability on individual links.

Volume-to-count ratios on screenlines, used to compare estimated with actual traffic volumes, are required to be within 10 percent for screenlines greater than 50,000 vehicles per day, and within 20 percent for screenlines less than 50,000 vehicles per day. Similarly, a comparison of traffic crossing a screenline can indicate a high level of precision, while volumes on individual links cut by the screenline can have high degrees of error. A percent root mean square error in the 35 to 50 percent range is considered acceptable and error ranges as high as 29 percent on individual freeway links and 56 percent on two-lane arterials are acceptable for calibration purposes.

Given the lack of precision in duplicating known conditions, how much confidence should we have in model outputs for uncertain future conditions? Let us not confuse complexity with precision. Unfortunately, our desire for an "impartial" number may be causing us to place unwarranted confidence in model results. For some of the uses to which the models are being put, the phenomenon being measured is smaller than the noise in the models.
Uncertainty of input assumptions

Limitations in the precision of the transportation planning models pale in comparison to the uncertainty of input assumptions. How precise can we be in forecasting national social and economic factors 20 years into the future? Given the inherent levels of uncertainty, how precise can we be in forecasting Florida’s share of that national economic activity 20 years into the future? Assuming we could forecast Florida’s share, how precise can we be in forecasting the share for a particular county? Within that county, how can we forecast these factors for 800 individual traffic analysis zones? How do we account for future recessions, fuel prices, interest rates, and a myriad of other influences? Yet the reality is that we do precisely this in every local government, with deterministic certainty.

Evidence of the massive uncertainty in the forecasting of land use, economic activity, and transportation demand can easily be found by reviewing local mass print media. In the recent past, the Tampa Tribune has featured a number of articles demonstrating the uncertainties:

- A September 1, 1991, article discusses the massive changes that have challenged the growth of Tampa International Airport, including such unpredictable events as various airline bankruptcies and major investments in competing airports in Sarasota, Fort Myers, and Orlando.
- An October 20, 1992, article titled “County planners to recommend reducing population estimate” notes that Hillsborough County population forecasts for the year 2015 are now expected to be 166,000 fewer than had earlier been officially forecasted for the year 2010.
- A May 21, 1993, article titled “Florida’s finances looking better” quotes the director of the Florida Legislature’s economic research unit as saying, “The problem with our forecasting technique is that we are always wrong.”
- An August 22, 1993, article notes that “County charts change of course [as] planners are revising the county’s development plan to reflect a slowing of the growth rate of the 1980s.”

If we go beyond the local print media, we can find additional examples:

- Various recent forecasts of Tampa CBD employment for the year 2010 have ranged from 50,000 to 90,000, while current employment is approximately 28,000 and barely holding its own.
- A feature article in the April 26, 1993, issue of Forbes on the new Denver International Airport notes that “Denver is about to open a replacement airport. Who needs it? Nobody. Either the taxpayers or the bondholders are candidates to be stiffed.” The problem in Denver, according to Forbes, is that “the Denver boom fizzled.”
- Leonard Evans, writing on “Future Predictions and Traffic Safety Research” in the January 1993 Traffic Quarterly notes that, “Although the prediction methods of astrologers and academics differ, two taboos seem to apply equally to each. First, it is socially gauche to question the foundations on which their predictions rest. Second, it is positively hostile to question how an individual’s earlier predictions matched what actually happened.”
- In a March-April 1993 article in TR News, “Trapped in the Forecast, An Economic Field of Dreams,” Louis S. Thompson proposes the “giggle” test to evaluate the reasonableness of forecasts.
Instead of recognizing this uncertainty, we continue to plan for an optimal response to a set of forecasts that will almost certainly not materialize. We develop plans as if we could take a rifle shot 20 years into the future and predict with certainty the precise magnitude and distribution of activities within a region. The reality is quite different--more like a shotgun blast.

The transportation planning process should be revised to recognize the uncertainty inherent in transportation modeling, and particularly in forecasting model inputs. A substantially different transportation planning process can be constructed that explicitly recognizes uncertainty, deals with alternative scenarios, and maximizes flexibility. A decision process that recognizes these factors should produce plans that are less deterministic, instead allowing future plans and projects to respond more dynamically to real events as they unfold. This issue will be addressed in Phase II of this study and is expected to result in proposals for revision of state guidelines to incorporate the explicit recognition of uncertainty into the metropolitan transportation planning process.

**The link between transportation and land use**

Interrelationships between transportation and land use are well known to transportation and land use planners. We know that there are important tradeoffs between regional mobility and land access and that access management is an important tool in preserving the mobility function of our highway system. We know that land use decisions affect transportation demand and that transportation investments are a major factor in location decisions.

On a regional basis, transportation facilities are determinants of the shape and character of urban form. Circumferential highways constructed around major cities have demonstrated the role of transportation infrastructure in shaping urban areas. The quintessential American land use, the suburban shopping mall, is frequently located at the interchange of a limited access highway with a major arterial and always with accessibility in mind.

The State of Florida has recognized this important interaction and is making great strides in promoting integrated land use and transportation planning. Florida has recognized that planning for land use, transportation, and other infrastructure must be integrated to achieve the State's growth management objectives.

The difficulty confronting transportation and land use planners is how to incorporate this integrated philosophy into technical practice. The interactions between transportation and land use are rarely acknowledged in analytical procedures. Most often, land use is taken as an exogenous variable to be input into the complex urban transportation planning models and a great deal of effort is spent testing and calibrating the models to assure that the replication of current conditions is acceptable. Applications are made to alternative transportation networks to test the effectiveness of each network in meeting anticipated demands of the land use scenario. If time and budget permit, the trip distribution process may be recycled to test alternative networks. But the fundamental impact of the transportation system on the placement of land use activity is entirely overlooked.

This process may be adequate when only marginal changes are made in the transportation system, but is not appropriate in the context of long-range comprehensive planning. It overlooks a very important fact--the specification of future land use and economic activities are highly
dependent on an assumed future transportation network. This assumption is not necessarily explicit—indeed, it rarely is. Nonetheless, when future land use plans are developed they are based on some anticipation of the future transportation network. Our standard approach recognizes that land use influences transportation. However, in the transportation planning process, transportation facilities are implicitly assumed to have no impact on land use.

One problem with the input of a fixed land use scenario is the probable underestimation of traffic volumes on major new highway facilities. Even though a proposed new highway would dramatically alter the transportation system, opening up vast undeveloped areas, the traffic modelling process for the study was based upon a single set of land use assumptions that did not reflect the proposed new facility.

Even without a reallocation of land uses, initial forecast year model runs show daily traffic volumes in the range of 40,000 to 100,000 in this rapidly growing area. After the facility is built, it will almost certainly reach its design year traffic more quickly than predicted, because, in fact, the facility will redirect development toward itself. Yet this fact of economic development is typically ignored in the transportation planning process.

Another example is the case of a Florida coastal city, where several recent studies have included a regional transportation plan update and studies to test the feasibility of a new water crossing. Here again, the process that was employed was one of assigning traffic from a fixed set of land use assumptions onto alternative transportation networks. Because the alternative networks included major differences in a proposed new water crossing, the probable land use characteristics under each transportation network would likely be very different. Nonetheless, the process ignored these effects and redistributed reassigned traffic from the same land use scenario, whether or not the new water crossing was part of the test network. This methodological shortcoming may account for the common experience of a new or improved transportation facility reaching its 20-year design capacity within a few years of opening.

Both of these projects had highly qualified and dedicated planners and engineers working on them. Discussions were held concerning the possibility of recycling through the land use assumptions, and in both cases discussions ended at the staff level. Several factors contributed to the decision to shortcut the technical process. The primary argument was the cost. Testing alternative land use scenarios could increase the cost by a factor of 50 to 100 percent. Another argument was the political difficulty of getting local MPO members to understand and endorse a single set of forecast year land use data. Introducing alternative land use scenarios, based on alternative transportation networks, would be far more complicated making it even more difficult to achieve consensus.

These arguments are not trifling ones; they reflect the real environment in which planners and engineers operate. Nonetheless, it accomplishes little to focus on refined model calibration, when the input data are a mere shadow of the probable reality. Instead, strong arguments should be presented to policymakers to justify the additional time and cost to develop a more integrated planning approach. What is needed is integration of a future land use plan and major features of a transportation network into a single scenario. Alternative scenario definitions would include a combination of land use and transportation assumptions. One alternative future
scenario might be that a major new highway facility would be built during the planning horizon. With this assumption in mind, land use allocations would be performed, which in turn would be input to a transportation network test of this combined land use and transportation network.

**Modal and Intermodal Planning**
Transportation planning and operations have customarily been separated by mode. ISTEA now requires a shift toward considering ways in which the transportation system can be made "seamless." Closer consideration of the connections between different travel modes promises to enhance mobility while making most efficient and effective use of each transportation mode within the overall system. ISTEA embraces two related concepts, intermodalism and multimodalism.

The term "multimodal" implies several modes or methods of travel. ISTEA recognizes that non-auto related transportation systems are underdeveloped, forcing heavy reliance on the automobile. Multimodal planning under ISTEA will involve trade-offs in transportation investment and programming as planners strive to achieve a coordinated transportation network that offers travellers with greater variety of modal alternatives.

Intermodal refers to connectivity or the linkages between modes. It includes physical facilities as well as the operational system that enables efficient transfers, such as coordinated routing, scheduling, and unified fare systems. Another aspect is provision of information to travelers. The San Francisco Bay Area, for example, has developed a regional transportation database, tying all transit systems together, that provides customers with information about the best route options, transfers, schedules, and fares for a particular trip origin and destination.

The concept of intermodalism originated from cargo shipping and includes such goals as fast, reliable delivery of freight and just-in-time delivery. ISTEA applies the intermodal concept to human transport, as well. The benefits of intermodalism include improved customer choice, system-wide accessibility for all sectors of society and enhanced economic competitiveness. Greater efficiency may also result in terms of fuel conservation and time savings due to reduced congestion.

**Florida intermodal plan and process**
In response to the requirements of ISTEA, the Florida Department of Transportation has embarked on two state plans—one emphasizing multimodal transportation planning and the other emphasizing intermodal transportation planning. The 1995 Florida Transportation Plan will include its first Intermodal Implementation Element. A draft report of the Preliminary Intermodal Planning Framework is currently under consideration by the FDOT Intermodal Task Force. The draft plan calls for an intermodal planning process that is integrated with the Florida Transportation Planning Process.

The process would include criteria for identifying and ranking projects and programs, a data management systems, a demand forecasting process, a needs identification process, funding sources, advanced technologies and innovative techniques (including regulatory changes), and a strategy and action identification process. The strategic planning process is intended to help FDOT and local governments move from a modal planning process to a proactive intermodal transportation planning process. Guidelines for analyzing needs will be provided for making preliminary estimates of changes.
in demand associated with intermodal improvements.34

Issues relating to intermodal planning identified in the Preliminary Intermodal Planning Framework include incorporating statewide intermodal planning in regional and local plans and vice versa; defining intermodal constraints and opportunities; serving tourists more efficiently; accommodating pedestrian and bicycle linkages; determining seaport and airport linkages with rail and highway systems; identifying benefits from resolving grade crossing conflicts; meeting data needs and establishing performance monitoring techniques; and business and economic investment considerations in developing intermodal facilities and services.

The draft report recommends that State demand forecasting models be used to determine intermodal flow to the region, and MPO models would be used for demand forecasting within the region. Selected projects would have to meet ISTEA requirements, State requirements of the Systematic Planning Process, and be consistent with the MPO Long Range Plans. To prioritize projects, weighted factors would be used.

Criteria for selecting projects, programming the intermodal plan, and monitoring performance will be modeled after those used in local, regional and State planning efforts and compared to criteria used in other states. Programming criteria will involve quantitative evaluations, such as point rating systems and benefit/cost ratios, as well as other criteria such as geographical equity, project readiness and projects that promote multijurisdictional cooperation.

Planning for a multimodal system
Since World War II, American society has become increasingly dependent upon the automobile and the highway system has been expanded to accommodate that need. The concepts of multimodalism and intermodalism recognize that there are limits to how large the highway system should become, there is value to be gained from developing other modes of travel, and that modal opportunities should be increased. To advance these objectives, the Preliminary Intermodal Planning Framework recommends that the FSUTMS state models incorporate consideration of auto, rail, air, truck, water and public transportation. The final report will provide guidelines for improving the models, including forecasting techniques and travel behavior factors.

Although efforts to improve the demand forecasting models are worthwhile, there is persistent risk in placing too much confidence in model results. The FSUTMS models were originally developed for highway corridor studies. Since then, the models have been used for a variety of applications for which they were never intended. Furthermore, forecasts of future travel needs are based in part upon past and present travel characteristics. Planning for future travel possibilities using current demand forecasting models is limited by the fact that many modes of transportation are either absent or so underdeveloped as to preclude widespread use and thus are not measured. Pedestrian travel, for example, is not considered in the FSUTMS models because it currently represents such a small proportion of overall travel.

Thus, the type of travel data collected and the way it is organized can influence how travel needs are identified, defined, and emphasized. Because current travel behavior fuels the desire and the need for “more of the same,” the process of identifying transportation needs becomes a self-fulfilling prophecy. It is important to consider that demand for alternative modes of transportation will not become...
evident until effective, safe, and convenient alternative systems are in place for commuters and travellers to use. Planning for more modal opportunities will require a fresh look at travel needs, travel behavior, and how we measure demand for different travel modes.

To a large extent, both travel needs and travel behavior are presently influenced by current development patterns and the highway system. Those who live in a suburban setting 40 miles from their place of employment will rely upon an automobile for their commute. A decision might be made to reinforce this travel pattern based upon the evidence supplied by present travel behavior. Yet intermodal planning cannot be evaluated separately from urban form and land development patterns. Moreover, it is necessary to look at the overall economic strategy of a region. For example, "The Urban Form Study: A Vision for Palm Beach County" in the 1989 Palm Beach County Comprehensive Plan, noted a lack of connection between employment and affordable housing in the County. Over half of the total employment in the county consists of jobs in the lower-paying service and retail sectors. With predominant single-family, large-lot development, housing opportunities for low and moderate income persons are scarce and an automobile is required for the journey to work.

The success of alternative systems are also interrelated. The success of transit, such as bus and commuter rail depend upon the pedestrian environment at the beginning and the end of the transit trip. An effective pedestrian environment depends upon the qualities and design of the urban form, which put trip origins and destinations within reasonable walking distance of transit. A successful pedestrian environment fulfills a variety of travel needs, not only the trips between work and home, but also the many necessary and routine errands that commuters otherwise combine into the work to home trip when they drive their cars. Planning for an intermodal system will be more successful if it is combined with efforts to guide the density, mix, and proximity of land uses to facilitate rail transit and non-motorized forms of travel, including bicycle and walking trips.

At the local level, a more strategic approach could be employed to provide multi-modal options and intermodal connections to directly meet transportation needs that support basic purposes, such as linking people with employment and educational opportunities. The South Florida Regional Planning Council, for example, has identified a low income community in north Dade County that lacks transportation access to employment and educational opportunities. Transit linkages connecting the community to colleges and universities in south Broward County are an example of community needs that can be strategically met through the transportation system.

**Ports and aviation**

Florida’s ports and airports are vital to the state’s economy and have major implications for surface transportation and land use. Ports serve as gateways for international trade and must have the capacity to move freight efficiently to take advantage of trade opportunities. Florida’s ports are already bracing themselves with the opening of overseas markets and the promise of future trade with Cuba. The Port of Miami, currently the cargo hub of Latin American and the Caribbean and the largest handler of containerized cargo in the state of Florida, is adding another 100 acres to its 225 acre container port on Lummus Island. The Port of Tampa is the eleventh largest port in the U.S. and is expanding its capacity to handle general and containerized cargo. A major new cargo facility
Florida is rapidly emerging as a global gateway, and cargo is a rapidly growing component of the state's aviation industry. Miami International Airport handles nearly one million tons of cargo annually. Moving cargo of this magnitude requires a highly efficient trucking transportation system. The Dade County Aviation Department has been coordinating with the MPO on this issue. One outcome was the provision of a new interchange off the Palmetto Expressway to serve the airport cargo area—an improvement that also removed heavy truck traffic from a nearby congested intersection. With the American Trucking Association predicting a 28 percent increase in truck traffic by the year 2000, coordination on freight issues will remain an ongoing need.

Aviation is also crucial for transporting the millions of tourists and conventioners that visit the state each year. Aviation officials advise that airports in Florida tend to be origin and destination airports—that is, the majority of passengers either begin or end their trip here, rather than connecting through. The Orlando area alone expects an increase from the current 40 million to approximately 60 million visitors per year by the year 2000. The significance to aviation is that approximately half of the tourists that visit Florida each year will come by air. At the same time, airport congestion is reaching crisis proportions. The Boeing Commercial Airplane Group is predicting a 240 percent increase in domestic traffic nationwide by 2010 and only a 20 percent increase in flight capacity at the top 50 U.S. airports.

With limited capacity for airports to absorb a greater frequency of flights, aviation technology is moving toward increasing the size of aircrafts—with plans already under way for a 700 passenger jet. All of this points to an even greater burden in terms of the amount of surface transportation that both ports and
airports will generate in the future. An integrated system for collecting and distributing goods and people from these facilities will be crucial to supporting tourism and other industries in Florida—and to remaining competitive in the global marketplace. What is needed is a coordinated governmental strategy that supports economic development through coordinated comprehensive planning and strategic investment in ports and aviation. Yet this has been hampered by inadequate attention to intermodal access needs of these facilities by communities that house international ports or airports, and a narrow view of the role these facilities could play in the local and regional economy.

In a critique of airport planning in the United States, Christopher Duerksen et al. describe the problem:

*Major highway access is addressed, but master planners rarely consider area-wide access systems. Consideration of economic impacts, usually part of the environmental impact analysis, tends to focus on changes in employment patterns, disruption of existing businesses, and the like—not on maximizing development opportunities. Land use planning is most likely to focus on controlling uses that may create hazards to air navigation rather than on broader issues, like the best location for hotel and commercial uses.*

The outcome of planning efforts surrounding to two new international airports, one in Denver and another in Pittsburgh, has revealed further potential pitfalls—including counterproductive competition between local governments for their share of the economic pie, and a continuing tendency of transportation planners to overly rely on one-dimensional highway solutions to access needs. In this context, efforts to coordinate land use planning and land use controls have largely failed and the potential for transit continues to be discounted. But unlike states with little or no influence over local land use planning, Florida's growth management mandates for regional consistency and coordination of planning efforts provide State and regional agencies with some leverage for improving coordination on these issues.

Given the interdependence between ports, airports, and highways, effective intermodal planning will be essential. High priority should be placed on improving intermodal connectivity and multimodal access to ports and aviation facilities in the local and regional planning process—and in State transportation investment decisions. Although ISTEA requires that MPOs created in 1991 or thereafter appoint port and aviation representatives to their voting membership, this remains optional for MPOs already in existence. Appointing representatives of port and aviation to the voting membership of their respective MPO would be one step toward raising regional awareness of these issues and enhancing intermodal coordination.
Coordinating Land Use and Transportation

Coordinating land use and transportation has been described as a “chicken and egg” problem, due to confusion over what comes first. Ideally, comprehensive planning would establish a community’s preferred development patterns and transportation system to fulfill that desired future. In turn, state and regional transportation planning would establish the statewide network, and access would be restricted between and around built areas to preserve the regional movement of traffic. In this scenario, land development patterns would support a variety of modal alternatives and be designed so as not to conflict with regional mobility objectives.

Yet land use and transportation are rarely coordinated to achieve growth management objectives. Instead, transportation planning responds to growth by increasing access to land and services. As transportation facilities are supplied to accommodate growth, they generate additional demand for land development. Corridors and interchange areas become the focus of intense development and growth radiates along the corridor and outward—ultimately creating another cycle of growth and traffic congestion. In this context, a preferred balance between managing and accommodating growth is seldom achieved.

One problem is that future land use plans and transportation models determine future need by projecting past trends into the future. This assumes that communities have little control over their design future. Yet local policy could be formulated to influence growth patterns through infrastructure investment decisions, land use planning, and strong regulatory measures.

Nonetheless, efforts to achieve better coordination between land use and transportation are frequently mired in political and institutional gridlock. Fiscal zoning (an overriding emphasis on enhancing the tax base), a mismatch between local control over land planning and state or regional control over transportation planning, the NIMBY (Not in My Backyard) phenomenon, legal battles over private property rights, land planning and regulation that perpetuates auto dependence, and the political bias toward “quick fix” solutions are among the many factors that impede regional coordination of transportation and land use objectives.

A paradigm shift is required to achieve land planning and regulation that supports mobility and better regional coordination of transportation and land use planning. One example of how the process could work is a national research demonstration project called LUTRAQ in Washington County, Oregon. LUTRAQ was commissioned by 1000 Friends of Oregon to develop an alternative to a proposed Western Bypass freeway that would extend outside Portland’s urban service area boundary. Concerns were raised that the bypass would bring pressure for an interchange outside the urban service area and inevitable sprawl.

The planning process involved overlaying light rail transit on transportation corridors identified in the existing regional transportation plan. With the assistance of neotraditionalist Peter Calthorpe, a series of transit oriented developments (TODs) were systematically applied along the corridor. Corridors were planned to
preserve the existing mix of housing densities, but to focus higher density housing in and around TODs. Light rail would be supported by a system of feeder buses operating at eight-minute headways between urban neighborhoods and rail stops, and express buses from areas further out.

This was combined with transportation demand management strategies including downtown parking limits and higher parking fees to support light rail use. Planners also will model the land use and transportation consequences of both the LUTRAQ and bypass alternative into the year 2040, incorporating the impact of highway expansion on regional growth and congestion. Regulatory changes would include permitting TODs as-of-right around transit stations and increasing density requirements in campus style office parks to promote reuse of parking areas.

Innovators in coordinating land use and transportation at the local level include the City of Orlando, Florida. Orlando's regulatory framework includes mixed-use corridors and mandatory mixed use in activity centers. The City eliminated strip commercial districts and limited the supply of commercial areas to encourage reuse. Other changes include minimum residential densities in certain areas, a traditional city overlay district that supports pedestrian amenities, and a sweeping approach to access management.

**Regional Mobility and Land Use Conflicts**

Among the factors impeding coordination of land use and transportation are underlying conflicts between local and regional goals. Land use decisions are a local prerogative, and reflect a broad range of issues and objectives—including the effect of transportation corridors on neighborhoods and community character. Transportation decisions are guided from a state or regional perspective, with an emphasis on efficient regional movement of traffic. These two perspectives frequently collide, as illustrated with the proposed extension of the Crosstown Expressway in Hillsborough County.

The extension of the Crosstown Expressway was recommended in the MPO's 2010 long range plan. The purpose of the extension was to enhance mobility on the Florida Intrastate system for east-west interregional traffic traveling through Brandon, much of it truck traffic, and to increase mobility between Brandon and Tampa's major employment centers. After reviewing several alternative alignments, the Expressway Authority settled on an elevated extension that would run above the SR 60 Brandon corridor.

SR 60 runs through the center of Brandon, an unincorporated and primarily residential community east of Tampa, and the proposed elevated expressway would divide the community in half. The Hillsborough City-County Planning Commission rejected the proposal as inconsistent with the comprehensive plan. This decision was based on the Commission's efforts to prepare a Community Design Element and a mid-range plan for Brandon that addressed visual appearance, enhancement of the business district, and the overall function of the community.

Debates also centered on whether regional demand was sufficient to warrant the extension. Some argued that the link was essential to regional and statewide mobility, whereas others questioned this assumption. Several alternative alignments were evaluated, each with advantages and disadvantages. Ultimately, a public hearing was held and in the absence of consensus on the alignment, the Hillsborough County MPO removed the proposed extension from the 2010 long range plan.
The Crosstown Expressway extension raised valid transportation and community concerns that ultimately may be irreconcilable in the absence of an acceptable alternative alignment. Yet underlying the conflict is the reality that Brandon evolved as it did, creating access problems on the regional transportation network, because of the absence of a coordinated, long-term approach to transportation and land use planning. Such a plan could have limited commercial development on SR 60, encouraged development of an urban core, and separated neighborhoods from the impacts of regional traffic.

**Citizen Opposition**

Citizen opposition is another obstacle to coordination of land use and transportation. Much of this opposition relates to locally unwanted land uses, such as urban highways, airports, and transit lines—the phenomenon commonly referred to as NIMBY. Yet citizen opposition is increasingly related to any physical changes perceived as a threat to “quality of life”—including mixed use rezoning, road widening, density increases, or as witnessed in Sarasota County—development in general (also known as BANANA—Build Absolutely Nothing Anywhere Near Anyone).

The growing skirmishes over growth, says Architect Roger Lewis, are “actually symptomatic of a fundamentally flawed process for designing the future built environment.” Lewis attributes the problem to the lack of a long-range vision and the reality that even visionary plans are profoundly difficult to carry out and enforce. Planning occurs in a cultural context of individual autonomy and private property rights, a political context that strives for a democratic ideal, but lacks continuity in leadership, and a legal context that thrives on conflict and is poorly equipped to address complex land decisions.

In this context, citizen reactions to growth reflect valid concerns about the ability of planners and public officials to preserve or enhance the quality of their living environment.

Public opposition is most effectively addressed through community debate. Trade-offs must be communicated in terms of costs and benefits if citizens are to reach consensus on the level of service they are willing to accept and the type of community they wish to create. Yet land use or transportation initiatives are often communicated through public hearings, forcing the public into a reactive mode. Excluding the public from the planning and decision process, fuels public suspicions and increases the potential for public opposition to planning proposals.

**Vision**

Lack of coordination between land use and transportation relates to problems inherent in the planning and regulatory framework. Other issues are institutional or political in nature. The root of the problem, however, is the absence of a local or regional vision on how and where growth should occur. Each community prepares a development plan in the context of its boundaries, with little regional coordination of physical and economic development goals. Consistency of land use is evaluated at the jurisdiction’s borders, but consistency of land uses is an ambiguous term. If land uses conflict, which community’s land use objectives should take precedence? How should communities deal with philosophical differences over how to grow?

Fiscal motives may also conflict with a long-term vision in zoning or rezoning decisions. A community faced with a proposal for a regional mall on the urban fringe, may be motivated more by the desire to create jobs and enhance the local tax base, than whether the proposal is...
consistent with the comprehensive plan or the capacity of available infrastructure. Given declining State and federal funding, local governments are increasingly motivated to maximize their fiscal return in land use decisions.

Lack of vision in comprehensive planning efforts also relates to the lack of attention to urban design issues. Urban design is the element most frequently missing from the planning process, yet it is fundamental to the quality of life issues that fuel citizen concerns over growth. Some of the more effective urban visions have combined urban design and economic considerations. The city of Stuart, on Florida’s Treasure Coast, built its planning efforts upon the qualities that citizens prefer—qualities that relate to the city’s historic charm. Through design charrettes, the City defined these qualities, determined existing threats to its character, and devised a plan and regulatory scheme aimed at creating a livable, economically vibrant community.

Effective visions translate broad-based values and individual preferences into specific action strategies (see Tables 8 and 9). They identify those aspects of the community that residents would like to preserve, and those that they wish to change. Design charrettes are effective because they translate citizen preferences into a clear course of action. The result is a plan that is accessible to the public, offers short and long term results, and inspires political support.

Economic development, transportation planning, organizational development—all benefit from a visioning effort. The challenge is achieving harmony among what are sometimes conflicting visions. Stuart, Orlando, and others across Florida are demonstrating that economic development and growth management can go hand in hand, and that a coordinated approach is needed.

Table 8
A PROPOSED TRANSPORTATION VISION FOR HILLSBOROUGH COUNTY, FLORIDA

<table>
<thead>
<tr>
<th>Vision Statement:</th>
<th>There is a balanced transportation system linking region-wide activity centers, with an emphasis on the quality of the users' experience.</th>
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<tbody>
<tr>
<td>Goals:</td>
<td>1) Build a commuter rail system in the Tampa Bay region in the future.</td>
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<td>2) Build a trolley system which connects Ybor City, downtown Tampa, and the Westshore area.</td>
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<td>3) More local and express buses in the future with reduced headways to 5 to 10 minutes.</td>
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<td>4) Develop a system of feeder buses to transport commuters to rail transit stations.</td>
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<td></td>
<td>5) Build a system of bikeways which can be used for many trips under 10 miles.</td>
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<td></td>
<td>6) Form transportation demand management associations (TMAs) in the University North area, Brandon, Carrollwood, Ruskin, St. Petersburg, Clearwater/Countryside, and Palm Harbor.</td>
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<td></td>
<td>7) Ensure that state growth management regulations relative to concurrency allow for more intense development and infill projects acknowledging that a more innovative way of measuring levels of service on the highway system is necessary to achieve a more urban development pattern.</td>
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<td>8) Amend land development regulations to require that basic goods and services are provided within the new community, eliminating the necessity to traverse the external road network.</td>
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<td></td>
<td>9) Develop Union Station into the transportation hub of the Bay area with transfer points between high speed rail, commuter rail, trolley cars and buses. Additionally, ensure that Union Station is equipped with shower facilities and bicycle storage facilities.</td>
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<td></td>
<td>10) Provide multi-modal transfer stations throughout the urban area where buses, rail, automobiles, and bicycles come together. Additionally, provide services such as day care and dry cleaning at these stations.</td>
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<td></td>
<td>11) Encourage telework centers in conjunction with multi-modal transfer stations to allow employers the option of allowing their employees to telecommute to work, reducing vehicle miles travelled during peak hours.</td>
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vision is fundamental to creating livable, prospering communities.

Ironically, state planning requirements have been cited as a barrier to achieving vision in the local comprehensive plan. Inadequate funding for planning efforts and the short time frame for preparation frequently resulted in a cookbook approach to planning aimed more at “achieving compliance,” than establishing a long term vision.\(^1\)

In an effort to incorporate visioning into the local comprehensive planning process, the ELMS-III Act added language to Chapter 163 encouraging local governments to develop a vision for their community based on their desired future appearance and qualities. Local governments are to review comprehensive plans, land development regulations, and capital improvements programs after their vision has been created to ensure that these instruments will lead the community toward its goal. Neighboring communities are encouraged to participate in creating a “greater-than-local” vision, especially those sharing natural, physical, or economic resources.

Some communities are already undertaking local and regional visioning efforts. Palm Beach and Martin Counties have engaged in a planning forum to identify alternative land use and development scenarios that will reduce urban sprawl and make the most out of public facilities and services. The overall mission was to develop a conceptual plan for the future that counties and municipalities could use in guiding and coordinating future growth. Three-day discussion sessions were held in August of 1993, a process that culminated in a greater understand-

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**Table 9**

**A PROPOSED TRANSPORTATION VISION FOR TRI-MET, PORTLAND, OREGON**

*Mission:* The mission of Tri-Met (the mass transit agency) is to assure increased mobility for a growing, compact urban region.

The following strategies support the mission:

1. Increase transportation system reliability and decrease customer complaints.
2. Increase transit ridership (currently 200,000) to 690,000 riders/day by 2005;
3. Decrease the cost of riders, maintain three months working capital, and increase the continuing revenue base by $145 million per year by 2005.
4. Increase the share of total trips made by walking, biking, carpooling and paratransit.
5. By 2005, expand the system to 1650 buses and paratransit vehicles and three operating rail corridors with two more in progress.
6. In partnership with other jurisdictions, help assure that 85 percent of all new growth within the Urban Growth Boundary is within a five-minute walk of major transit.

**Actions:**

- Create 10-minute corridors to increase speed, frequency and reliability of service, so that a bus arrives every 10 minutes.
- Work with other jurisdictions so that transit is given preferred treatment on roads.
- Increase bus and light rail service hours 67 percent.
- Secure legislative authority on one or more taxing measures (such as tailpipe fees of $25 per car, system development charge of $1,000 per parking space, or commercial parking fees) to discourage car use and raise transit revenues.
- Provide almost door-to-door mini-bus service to link customers to rail or 10-minute bus corridors.
- Create trip-planning information for multi-modal trips and good linkage between various modes.
- Create attractive, transit-supported pedestrian and bike environments.
- Successfully adopt one or more alternative fuel technologies.
- Develop 1900 park-and-ride spaces.
- Pursue joint development opportunities at key transit stations.

ing of the issues and dialogue toward reaching consensus on a regional land use vision. The desired product of the forum will be a Strategic Growth and Development Plan for the region.

One method of encouraging greater attention to vision in the planning process is through mapping build-out, as it is currently prescribed in the future land use plan and zoning map. If this is done on a countywide or multi-county basis, it will provide a visual picture of where the region is heading based on the current planning and regulatory program. This will facilitate identification of potential problem areas and development of alternative scenarios. The Palm Beach County and Martin County efforts are examples of how communities have used alternative land use scenarios to coordinate toward a countywide or multi-county vision for future growth and development.

**Land Development Regulation**

Local regulatory systems in Florida often fail to provide what the community is trying to achieve from a policy perspective. Commercial strips are a case in point. The dominant growth pattern in Florida, especially in unincorporated counties, has been large residential subdivisions served by commercial corridors, where all trips are forced onto arterials for basic goods and services. Although cluttered and congested commercial strips top the list of the public’s least desired development patterns, the local planning and regulatory framework continues to prescribe them.

The practice of strip zoning major corridors for commercial use is widespread. The primary reasons are accessibility and the expedience of rezoning highway frontage for commercial use as additional land is needed. Contributing factors are the rigorous separation of land uses prescribed by conventional zoning and the absence of a coordinated approach to neighborhood planning in developing suburban areas. Extension of utilities along highway rights-of-way promotes this linear land use pattern, and commercial businesses favor corridor locations because of the ready supply of drive-by customers.

Yet, as development intensifies, the growing number of curb cuts and turning movements conflict with the intended function of arterials—to move people and goods safely, quickly, and efficiently. Unlike urban downtowns or activity centers, commercial strips are not designed for pedestrian or transit access. Commercial corridors, residential areas, and office parks are frequently sealed off from each other with walls, ditches, loading docks and a host of other barriers—including the heavily-traveled arterials that serve them.

Poorly coordinated access systems force more trips onto the arterial; traffic conflicts multiply, and congestion increases. As the level of service declines, additional lanes, controlled medians, and other expensive retrofitting measures are needed to maintain the capacity of the corridor for regional traffic. Businesses also suffer as accessibility deteriorates. The long term result is functional deterioration of the roadway and transformation of the commercial strip into a confusing jumble of signs, curb cuts, utility lines, and asphalt. Yet these corridors are essential to moving people and goods. Ultimately the entire cycle is dysfunctional—sacrificing economic development, community character, and mobility objectives.

Regulatory innovation and design solutions are difficult to advance without strong leadership and support from state and local elected officials. The threat of litigation has further constrained efforts to innovate or strengthen the local...
regulatory approach. Political opposition and legal threats to access management on both a state and local level, for example, are contributing to functional deterioration of portions of the state highway system. The courts are an ineffective forum for weighing these public policy decisions, which are becoming increasing complex. Public education and mediation activities are more effective and less costly methods of improving coordination in these matters. A visioning effort would help build public support for regulatory innovation by establishing the relationship between public policy and the appropriate tools for managing and guiding urban growth.

Clearly, coordination of land use and transportation requires sound planning and strong local regulatory authority over land development. In turn, local governments must be encouraged to apply new regulatory tools, including access management and flexible zoning, to improve coordination between land development and regional mobility. This will require a stronger partnership between State and local governments in carrying out the intent of the Florida Transportation Plan and state growth management requirements.

Concurrency, Through Traffic, and Regional Demand

Although traffic congestion is a regional phenomenon, transportation concurrency is not coordinated on a regional basis. Substantial variation frequently exists in the method used for measuring level of service and managing concurrency across jurisdictions within a single region. Jurisdictions in the Orlando metropolitan area, for example, exhibit a broad range of methods in LOS measurement and concurrency management systems.

Another limitation of transportation concurrency is the piecemeal approach to evaluating system performance. Under the current framework, local governments divide their transportation network into roadway links and intersections to monitor level of service and determine concurrency. Most communities evaluate level of service using a volume to capacity ratio that divides peak hour demand volume by the maximum capacity of the roadway or intersection.

This approach to identifying and providing for roadway improvement needs presses local officials to react to congestion on specific links or intersections. Thus, it has done little to address the relationships between regional development trends and traffic congestion. It has also led to a narrow view of potential solutions, which revolve almost exclusively around building new roads, adding more lanes to an existing facility, or improving signalization.

The emphasis on supply strategies, without equal emphasis on managing demand has led to conflicts between transportation concurrency and other state, regional, and local goals. Leapfrog development, constraints on urban infill and redevelopment, the threat of widespread development moratoriums, and destruction of community character are among the major problems related to the transportation concurrency framework. Some of these conflicts relate to the reliance of transportation concurrency on local solutions to transportation demand that is generated, in varying degrees, from outside the jurisdiction.

The amount of degradation on a system due to growth in through traffic is not uniform. It tends to be far higher in communities situated on major transportation corridors or with crossroads in several directions. Communities that lie in the path of through traffic, and those in areas experiencing heavy tourism, are truly constrained in their ability to manage level of service and congestion.
using strategies aimed at limiting land development.

Major metropolitan areas often experience substantial residential activity in fringe areas, while core areas struggle to meet the growing demand. Orange County, for example, faced a moratorium on some of its major thoroughfares, while neighboring counties continued to permit building activity along those arterials just across the border—increasing demand on those corridors. After extensive negotiations with the State, Orange County was allowed a 15 percent degradation of peak hour traffic volume on its constrained and backlogged roadways. Nonetheless, the underlying problem remains.

This issue reverberates across jurisdictions in high growth areas. Martin County is impacted by external development on the causeway and from adjacent counties and their municipalities. On a smaller scale, the Village of Tequesta in Palm Beach County is adversely impacted by development approvals in Martin County. The Martin County Commission considered the possibility of cost sharing with adjacent jurisdictions to address development activity across the border that generates a need for transportation improvements within Martin County.

The city of Stuart, located off of US 1 and the Florida Turnpike on Florida's rapidly growing Treasure Coast, is facing a dilemma in this regard. Through its comprehensive planning effort, Stuart developed a vision that emphasizes preserving its "old town" charm. By enhancing community character and supporting pedestrian-oriented design, this policy framework has helped stimulate revitalization of the downtown—which, say City officials, is now nearing 100 percent occupancy.

Stuart is also nearly built out, and yet traffic on its roadways continues to increase due to high growth in the surrounding area, including Hutchinson Island and Port St. Lucie to the north—a bedroom community that provides affordable housing for those who commute into Stuart for work. Through traffic is also growing north/south via US-1 and SR A1A and east-west along Monterey Road. To address these pressures, Stuart could expand its roadway facilities. Yet to do so would undermine the city's efforts to enhance its historic character. Development moratoriums along congested roadways would do little to reduce demand from externally generated trips.

This raises several policy questions. What is a community's "fair share" of a regional transportation problem? Should municipalities be required to increase local roadway capacity to accommodate growth in the surrounding region? How do we reconcile road widening or potential moratoriums with efforts to preserve community character or revitalize a downtown? Are local limits on land development effective in addressing regional transportation problems?

The new transportation concurrency management area (TCMA) approach offers one alternative. To qualify for TCMA designation, an area must be a "compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips." TCMAs provide relief from the need to increase lane capacity to meet peak hour demand in urban downtowns and activity centers, provided the community engages in a comprehensive program for managing demand. This may include congestion management alternatives, like transit, transportation demand management, limits on the number of parking spaces, and pedestrian circulation plans.
Yet the TCMA approach is reserved for “compact geographic areas with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips.” This would not include linear problem areas, such as intensely developed corridors, or the auto-oriented, low density development patterns typical of so many Florida communities. The TCMA policy also falls short of a regional or even citywide perspective. Cities and counties will have difficulty addressing congestion problems in activity centers through transit, TDM, and other trip reduction alternatives without a regional perspective of the problem and regional cooperation toward a solution.

**Who pays?**

Conflicts over financing shared impacts have also arisen between large and small jurisdictions within metropolitan areas. Officials in Orlando and Orange County expressed concerns that smaller communities have not contributed their fair share because they have no transportation impact fees, continue to seek annexation, and allow development to occur and spill off onto already constrained State highways and County roads.

Counties may by referendum enact countywide impact fee sharing to address regional impacts. Yet a referendum to allow a countywide system of impact fee sharing between unincorporated Orange County and its municipalities failed. This has had a negative effect on the arterial network and has been a shortfall in efforts to develop an effective regional transportation strategy. Only the DRI process provides an opportunity for funding transportation impacts that cross county borders. Without a carrot and stick approach it is doubtful that communities would enter interlocal agreements across county boundaries for impact fee sharing or concurrency management.

The severity of the local transportation deficit in some areas raises the need for expanded funding authority or a longer time frame for addressing mobility needs. The new long term concurrency management area approach provided under the ELMS-III Act has gone far to address this previous shortcoming of the transportation concurrency framework.

**State LOS and funding concerns**

Funding and equity concerns surround the concurrency framework that requires communities to overcome a transportation deficit caused by decades of rapid growth and underfunding—particularly on state roads. Historically, much of the controversy related to the requirement that municipalities maintain level of service standards set by the Florida Department of Transportation for State roads. These were set largely at LOS D in urban areas, LOS C in transitioning areas, and LOS B in rural areas.

Municipalities were required to maintain these standards wherever feasible and provide adequate justification if not. Yet, because of growing regional demand, peak hour traffic congestion on major thoroughfares in metropolitan areas has often exceeded the required state level of service threshold. Peak hour traffic on the state system in many large metropolitan areas is often at LOS E or F. The US-1 corridor on the Treasure Coast, for example, currently operates at LOS E. The ELMS-III Act has addressed this problem by providing local governments with authority to set their own level-of-service standards on the State Highway System, except for roadways designated as part of the Florida Intrastate Highway System.

Yet, from the state perspective, local planning and regulatory practice has exacerbated state funding backlogs. The tendency to strip zone major arterials for commercial use without adequate access...
controls has seriously undermined the level of service on many state roads, and interchange areas have exploded in the absence of subarea planning and development controls. Concurrency has done much to help increase recognition of the relationship between development decisions and transportation improvement needs.

**Concerns of small towns and rural areas**

The concurrency framework poses special problems for small towns and rural areas. The city of Chipley is a small community in Washington County that developed on the intersection of two State roads. When the community received a request to locate a discount retail store south of the main intersection, officials found that one regional discount store could consume a large amount of the city’s roadway capacity. A few more projects of similar intensity and Chipley could reach its capacity limit.

With no right of way to expand its two-lane road downtown, a proposed alternative is a bypass that would bypass the downtown business district. Such a solution would be cost prohibitive, and the city is reluctant to remove pass-by traffic from the downtown area—for obvious economic reasons. Furthermore, a by-pass may not be the most desirable solution for communities that wish to retain a small town character as they grow.

Small towns and rural communities require technical assistance, both from FDOT and their respective Regional Planning Councils, in identifying reasonable alternatives to meeting their transportation mobility needs. They should be assisted with developing alternative modes of transportation appropriate to their size and circumstances. They should be encouraged to take risks and use creative planning and regulatory approaches.

Concerncy management in rural areas is perhaps less pressing than in areas experiencing rapid growth. It is crucial, however, for small and rural communities to build their capacity to plan and guide future development. The time to address planning considerations is before problems occur. Rural areas have the advantage of being able to capitalize on the mistakes and solutions of others and preserve their character, environment, and prosperity as they grow. Yet they require assistance with developing planning and regulatory systems that are appropriate given their administrative capacity.

**Toward a more flexible approach**

These issues illustrate some of the practical problems of the transportation concurrency framework. Clearly, traffic is not confined to a specific link or intersection. Nor do transportation systems end at the county or municipal boundary. Yet in monitoring level of service for concurrency, local governments stop at these artificial lines. In this context, the relationship between regional development trends and movement of traffic has been largely neglected.

California allows counties to exempt externally-generated trips from LOS calculations when preparing congestion management plans. Yet this has been raised as a major shortcoming of their congestion management legislation. Rather, some transportation professionals in Florida are recommending that transportation concurrency management should be moving toward a regional or systemwide approach. Transportation concurrency could be defined on a corridor or systemwide basis, or within the context of the long range transportation plan. The planning approach would define the region’s long range transportation plan as the “adequate public facility” for transportation concurrency management. The rationale is that a regional or
systemwide view is essential if we are to effectively coordinate the benefits of other efforts, such as transportation demand management and transit.

A transportation concurrency management system proposed for San Diego, California was based on two strategies: a 20-year horizon for attaining preferred levels of service to avoid moratoriums and area-wide level-of-service averaging to allow deficient levels of service in intensive urban areas to be offset by excess capacity in other areas. This approach has been praised for recognizing that correcting infrastructure deficiencies and providing capacity to serve new growth typically requires a long horizon and community-wide approach.

Recognizing problems inherent in the transportation concurrency framework, ELMS-III proposed several revisions aimed at increasing flexibility. The bill includes provisions aimed at reducing barriers to urban infill development and redevelopment caused by transportation concurrency and to accommodate transit, TDM, and other ways of enhancing mobility. Local governments are required to establish guidelines for granting these exemptions, which are permitted only if the development is consistent with the comprehensive plan and either promotes public transportation or is in an area designated in the plan for infill, redevelopment, or downtown revitalization. Communities are also offered relief from the periodic site-specific congestion caused by special events.

The bill also increases local flexibility in managing concurrency on State roadways. For all roads on the State Highway System other than those designated as part of the Florida Intrastate Highway System, local governments may establish an adequate LOS standard that need not be consistent with any level-of-service standard established by the DOT" (Sec. 163.3180[5][d]).

Transportation Concurrency Management Area were written into legislation as another flexible application of transportation concurrency, for the purpose of promoting urban infill and redevelopment. TCMA's are to be identified in the local comprehensive plan and may only be applied in a "compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips."

Local governments may establish area-wide levels of service standards for transportation concurrency management areas based upon "an analysis that provides for a justification for the area-wide level of service, how urban infill development or redevelopment will be promoted, and how mobility will be accomplished...."

The legislation provides a three-year timeframe for bringing transportation facilities on line, but provides for a longer term concurrency management system with a planning period of up to 10 years for specially-designated districts where significant backlogs exist. These must be adopted as part of the comprehensive plan. Communities may adopt interim level of service standards on certain facilities and may rely on a 10-year schedule of capital improvements as a basis for issuing development permits in these districts.

The provisions allow extension of the long-term concurrency management system to 15 years depending upon:
- the extent of the backlog;
- whether the backlog is on local or State roads;
- the cost of eliminating the backlog; and
- the local government's tax and other revenue raising efforts.
These revisions have done much to increase the flexibility in the framework as it relates to infill, redevelopment activities, and the need for longer time frames for improving seriously constrained facilities. The amendments also strengthen provisions for intergovernmental coordination and provide for a formal mediation process to enhance regional coordination. Unfortunately, intergovernmental coordination has not been effective in these matters in the past because of the sensitive trade-offs that must occur—trade-offs that revolve primarily around who pays and who does not.

It is essential that concurrency be flexible enough to allow communities to pursue alternatives for managing congestion that provide a more lasting solution or are more consistent with a community's long range planning and development goals. ELMS-III provisions aimed at increasing the flexibility of transportation concurrency, combined with the federal emphasis on congestion management under ISTEA, have helped provide the policy framework. Alternatives to measuring level of service are being developed at the local level that recognize alternative modes of transportation. These are described in detail in the Task 6 report of this study.

**Roadway concurrency and transit**

In reviewing transportation concurrency, local governments evaluate mass transit facilities, such as commuter rail stations or transit terminals, as traffic generators. For example, automobile trips made by motorists seeking to ride commuter rail will be removed from roadways leading to the rail destination and redistributed onto roadways accessing the rail station. However, the rail station itself does not generate new trips. On the contrary, the net effect of rail service is an overall reduction in vehicle miles travelled. The logical flaw of evaluating mass transit facilities as traffic generators can be illustrated by comparing the transportation function of rail and highway facilities. Highway links between intersections operate in much the same way as the rail line between stations. Similarly, interchanges of limited access highways function in much the same way as rail stations. The development of a new interchange redistributes traffic on connecting streets in much the same way that traffic is redistributed by development of a new rail station. Yet rail stations are evaluated for roadway concurrency, while highway interchanges are not. Alternatively, if transit facilities are evaluated for roadway concurrency, then a consistent application would suggest that roadway projects also be evaluated for their impact on adjacent road segments. For example, if a new highway redistributes enough traffic onto crossroads to violate the level-of-service standards on those roads, should the new highway be required to mitigate those impacts? Clearly, this would be an absurd interpretation of the transportation concurrency rule.

Part of the problem is that transportation concurrency, as it is statutorily defined, addresses transportation facilities in terms of roadways and defines transportation concurrency in terms of highway level of service. Even transportation concurrency exceptions for urban infill and redevelopment projects, provided by the new ELMS-III legislation, pertain only to roadway concurrency exceptions. The overlooked fact is that public mass transit facilities, such as bus and rail stations, are as much a part of the urban transportation system as are interchanges of limited access highways. Given that both transit and highways provide transportation service, why is transit treated as a cause of congestion, rather than a solution?
Roadway concurrency evaluation should be revised to recognize that public mass transit facilities such as rail stations, transit depots, bus stations, and park-and-ride facilities are all part of the roadway traffic congestion solution, not part of the problem. This conclusion is consistent with the original intent of transportation concurrency, to ensure that transportation facilities are available to address the impacts of land development.

Coastal Development
Almost 80 percent of Florida residents currently live in the 35 coastal counties, which comprise the “coastal zone” for planning and coastal resource management purposes (Chapter 380.205[3], F.S., as amended by the ELMS-III legislation). Beach property is among the most demanded real estate in Florida. Yet hurricanes, tropical storms, and shoreline erosion pose a serious threat to public and private investment in these areas. Most of Charlotte County’s shoreline, for example, is zoned for residential use. Yet there is continual shoreline erosion, both gradually and drastically during a storm. According to the 1987 Coastal Management Element of the Charlotte County Comprehensive Plan, property values threatened by erosion exceed $31 million. Beach renourishment is costly, and the effects are generally not permanent.

Paths of storms are unpredictable. Florida in its entirety is storm prone, but coastal areas are particularly risky due to the combination of high wind and flooding. The vulnerability of Florida’s coastal areas was most vividly illustrated by Hurricane Andrew in August 1992, which dislocated over 200,000 people and destroyed over 85,000 businesses. Flood damages were estimated at $25 billion. Access and communication to some areas were cut off for weeks. The clean-up and restoration continue one year later.

Hurricane evacuation is vitally important to southwest Florida. The region is more vulnerable to storm surge than anywhere else in the state. The extent of hurricane storm surge inundation has been plotted in the "Hurricane Storm Tide Atlas for Lee County," prepared by the Southwest Florida Regional Planning Council, based upon the category of the hurricane and a number of other variables. Depending upon the path and intensity of the storm, the Atlas shows that any area along coastal Lee County could experience flooding for several miles inland, in many cases as far inland as I-75.

Evacuation times depend upon the density and magnitude of the endangered population as well as the transportation system used for evacuation purposes. Lee County has among the longest estimated evacuation times in the state. The regional goal for evacuation times in Southwest Florida is to restore the evacuation times to 1985 levels by 1995 and to not exceed an evacuation time of 18 hours for the entire region by 2010.

The Southwest Florida Regional Planning Council identified a number of problems in achieving this goal. In some coastal counties in the region evacuation times for a Category 1 storm, which is the category of least intensity, can exceed 26 hours. Rezoning and rebuilding applications are not reviewed for their impacts on evacuation routes and times. Evacuees, many of whom are new to Florida, may have little experience with hurricane evacuation.

Mobile home areas are of particular concern because of their high vulnerability to strong winds and the potential for building materials from destroyed homes to turn into flying debris. Inland Florida counties must not only consider people evacuating inland, but also their own populations must evacuate because of the high percentage of people living in mobile
homes. In 1987, for example, almost 44 percent of Glades County residents lived in mobile homes or recreational vehicles.54

The highway map of southwest Florida reveals few alternatives for evacuating low ground. I-75 northbound follows the coastline and leads motorists toward and alongside the coast in Sarasota County up toward the storm-prone Tampa Bay area, which itself has among the longest evacuation times in the state. The Cape Haze Peninsula in Charlotte County is especially vulnerable. Undergoing continuing residential building, much of it advertised as luxury single-family and condominium development, this area is served by just two routes off the peninsula—U.S. 41, which hugs the shoreline as it leads to the Tampa Bay area, and State Route 776, which is a two-lane bridge as it crosses over the Myakka River to the mainland. There are many such bottle-necks in coastal areas across the state. Evacuation routes themselves may flood in the event of heavy rainfall prior to the hurricane (see Figure 4).

This discussion raises some questions: What is the extent of government responsibility to protect the public in these matters? What should the public reasonably expect? The more government tries to protect the public, the more the public expects to be protected not only from unavoidable danger, but also from their own decisions. In this case, it is the decision to locate in a storm prone area with full expectation of safe evacuation in the event of a disaster and post-disaster emergency services.

New legislative sessions spawn new preparedness initiatives, especially following major storms. The 1993 legislative amendments included a number of bills to address disaster planning. For example,
CS/CS/HB 911, resulting from the Governor's Disaster Planning and Response Review Committee, requires the preparation of a State emergency management plan to coordinate resources. It will address government agency coordination, evacuation, shelter, communication, provision of food and medical supplies, and other items.

Although the plan is intended to minimize public expenditures, plan preparation is to be funded by surcharges on property insurance policies, totaling approximately $12,700,000. It was anticipated that costs of plan preparation may exceed revenues by approximately $3,060,000. Because not all property owners with insurance policies live on the beach, the total insured population is subsidizing hurricane protection for those choosing to live on the beach.

A spokesman of A.M. Best Company, which rates the financial health of insurance companies, said that Florida residents have enjoyed unrealistically low priced homeowner's insurance for decades. Many larger insurers have since increased their premiums 20 to 35 percent. While insurance companies have paid more than $15 billion for rebuilding after Hurricane Andrew, many insurance companies have either moved their business out of Florida or become insolvent. Because the State guarantees insurance policies, the taxpayers may be left footing part of the bill.

The problem of subsidized coastal living goes beyond the state of Florida to the National Flood Insurance Program (NFIP). Homeowner’s insurance policies do not cover flooding. Separate policies must be obtained through the NFIP. The original concept of the National Flood Insurance Act of 1968 was twofold: to help coastal communities recover from flood devastation and to impose building elevation requirements upon coastal redevelopment, as established by the Federal Emergency Management Agency.

While the building elevations have reduced flood damage, the combination of flood insurance, disaster relief and flood control structures have had the unintended effect of encouraging new development in flood prone areas.

Presently, insurance rates to individual coastal property owners are low, while the true cost burden of disaster relief is greater and is paid for by the state and the nation as a whole. Additionally, reconstruction after a disaster is often similar to that which was originally there.

While many Floridians are now being denied homeowner’s insurance, the rebuilding continues. Many residents are replacing their destroyed homes with ones that are more expensive than before. The community of Homestead is rebuilding much the way it was prior to Hurricane Andrew. Nationwide, examples can be found in which communities rebuild in the same disaster-prone areas. Observers of disaster aftermaths note a strong psychological need to rebuild exactly the way it was prior to the disaster. Although it remains certain that severe storms and hurricanes will hit Florida, no one knows exactly when and where they will hit. This uncertainty about the actual degree of danger has resulted in a lack of individual conviction to avoid these areas.

Most urban development in Charlotte County is within the Hurricane Vulnerability Zone (the 100-year hurricane flood zone). Some of this is comprised of older development that does not conform to minimum standards for ground floor elevations. Approximately 43 percent of the dwelling units were built before 1974, prior to the County’s participation in the National Flood Insurance Program. The County’s zoning regulations for nonconforming uses require any structure that
undergoes substantial improvement or enlargement (exceeding 50 percent of the original enclosed area) to elevate the lowest habitable floor to the 100-year flood level as specified on Flood Insurance Rate Maps.

There are approximately 300,000 platted lots in Charlotte County, most of which are platted at four lots per acre. According to the growth management strategy of the Future Land Use Element, intensive residential and associated commercial development should be directed to the Urban Service Area. The County’s Urban Service Area has been defined based upon existing patterns of development and public facility provisions within the County and the City. A review of the locations for the Urban Service Area and the Hurricane Vulnerability Zone show that these areas generally overlap. While it may be difficult to reverse the effects of prior public facility provision, the purpose of growth management is to attempt to alter existing patterns of development that are unwise.

The Charlotte County Coastal Management Element identified that there has been no formal mechanism in place for the review of sub-DRI development projects as to their impact on disaster preparedness and hurricane evacuation routes. The Coastal Element presents an excellent discussion of growth management techniques to reduce risks to life and property, including land acquisition, planning and zoning, fiscal policies, public improvements, transfer of development rights (TDR) and environmental controls.

Charlotte County’s survey of the use of these techniques across four southwest Florida counties and their municipalities indicates that acquisition, public improvements, TDRs, and fiscal policies are generally not used while environmental controls and planning and zoning are used or promoted for use. However, environmental controls, such as minimum building elevations and storage capacities in drainageways, have not limited development in the hurricane flood zone.

The Coastal Element lists land uses that should be discouraged in high hazard areas, including moderate and high density residential development, commercial and industrial development, schools and utility development. Encouraged uses include water dependent commercial, industrial and tourist development, agriculture and estate housing (from one unit per five acres to two units per acre). While no mention is made of low density residential development (one to five units per acre), a review of the land use map shows that the vast majority of land within both the urban service area and the hurricane vulnerability zone is low density residential.

If these low density residential areas were to develop according to the existing trend, extensive homebuilding on one quarter acre lots will occur. It appears that a build out scenario of low density residential development, as Charlotte County defines it, would result in a large number of new residents requiring evacuation in the event of an emergency. A review of the available hurricane evacuation routes in the area indicates few options.

State requirements for the coastal management element of the local government comprehensive plan establish goals to restrict development activities where appropriate to protect human life, limit public expenditures and protect natural coastal resources. All local governments located in the coastal zone (abutting the Gulf of Mexico or the Atlantic Ocean) must prepare a coastal management element that contains a component outlining principles of hazard mitigation and population evacuation and a redevel-
opment component containing principles for eliminating unsafe development when opportunities arise (Chapter 163.3178(2), F.S.).

The coastal management element must also contain specific objectives promoting the above goals. These must include an objective to prepare post-disaster redevelopment plans that will reduce exposure of human life and property to natural hazards and an objective to direct population concentrations away from known or predicted coastal high hazard areas. The 1993 legislative amendments simplified the definition of “coastal high hazard area” to mean the area requiring evacuation during a Category 1 hurricane as defined by the Regional Planning Council’s hurricane evacuation study for that local government.

Rule 9J-5.012, F.A.C. also identifies required policies to carry out the above required objectives. These policies include the identification of regulations or management techniques for:

- limiting development in coastal high hazard areas, and
- relocating or replacing infrastructure away from these areas.

The 9J-5 draft rules propose to amend this policy to reflect 1993 legislative changes to Chapter 163.3178, F.S., emphasizing that application of mitigation and redevelopment policies will be at the discretion of local government. Rule 9J-5 also includes a policy to identify regulatory or management techniques for post-disaster redevelopment, including how to limit redevelopment in areas of repeated damage. Again, 9J-5 draft revisions include emphasis that the identification of such policies are based on locally determined criteria and appropriateness.

The ELMS-III Final Report cites that no local government has thus far prepared a post-disaster redevelopment plan, despite legislative requirements. Chapter 163.3178(2)(f) requires a redevelopment component outlining principles to eliminate inappropriate development in coastal areas “when opportunities arise.” This language is unclear, and there is no mention of post-disaster redevelopment. It is recommended that clarification be made concerning the responsibilities of local governments located in the coastal zone for preparing post-disaster redevelopment plans.

The ELMS-III Committee recommended that DCA prepare a model post-disaster redevelopment plan with implementing ordinances, and amendments to J-5.012, F.A.C., to contain minimum criteria for post-disaster redevelopment plans. These recommendations are endorsed as a means to provide more concrete guidance on the contents of such a plan.

As recommended by the ELMS III Committee, the 1993 Legislature revised Chapter 163.3177, F.S. to encourage local governments not otherwise required to prepare a Coastal Management Element, to adopt hazard mitigation/post-disaster redevelopment plans, including policies regarding redevelopment, infrastructure, development densities, non-conforming uses, and future land use plans. Grants to assist in developing these plans are being provided.

Another required objective of the Coastal Management Element is to find ways to limit public expenditures that subsidize development in high-hazard areas that was permitted after the element’s adoption. Specifically, Chapter 380.27(2), F.S. states:

After a local government has an approved Coastal Management Element pursuant to Chap. 163.3178, F.S., no State funds that are unobligated at the time the Element is approved shall be expended for the purpose of planning, designing, excavating for,
preparing foundations for, or constructing
projects which increase the capacity of
infrastructure unless such expenditure is
consistent with the approved Coastal
Management Element.

Amendments to Chapter 380.2, F.S. cite
the recognition that:

Removing coastal properties from the pool of
developable acreage reduces the adverse land
use and environmental impacts the state
coastal zone management program is
attempting to eliminate or diminish, while at
the same time minimizing public expenditures
and reducing risk to life and property in
storm-prone coastal areas. To this end, the
acquisition of coastal lands shall be an
important component of the coastal zone
management program.

In recognition that land acquisition is the
most effective means to support the goals
of coastal management, the ELMS-III
Final Report noted that current land
acquisition selection processes do not
consider the value of available smaller
parcels for hazard mitigation. The 1993
Legislature acted upon the ELMS recom-
mendations by amending the Florida
Preservation 2000 Act (Chapter 259, F.S.)
to consider additional land selection
criteria, including:

The value of acquiring coastal high-hazard
parcels, consistent with hazard mitigation
and post-disaster redevelopment policies, in
order to minimize the risk to life and
property and to reduce the need for future
disaster assistance.” (Chapter 259.101
[d][1], F.S.)

The legislature’s continued search for a
permanent source of funds to implement
the Florida Preservation 2000 Act is
endorsed by this study.

The Coastal Resources Interagency
Management Committee (IMC) was
created in the 1980s as a part of the
Florida Coastal Management Program
(Chapter 380, F.S.) to provide a forum for
state agencies to reach consensus on
multijurisdictional coastal issues. The
IMC is composed of 23 agency heads,
including the secretaries of DCA, FDOT,
and the Department of Commerce. The
ELMS-III Committee endorsed a recom-
mandation previously made to the
Governor’s Office in July 1991 that the
1993 Legislature should better define the
responsibilities and authority of the IMC
to make it more effective. The ELMS-III
Final Report observed, “...there is no state
policy framework to guide the IMC in
decisionmaking. In sum, the Legislature
has not established coastal policy priori-
ties or a mechanism to resolve policy
conflicts.”

ELMS-III identified the need for a means
to ensure that State agencies implement
statewide coastal policies in a consistent
and coordinated manner to comply with
the Federal Coastal Zone Management
Reauthorization Amendments of 1990.
ELMS-III recommendations included that
the IMC serve more actively in develop-
ing, coordinating, and reviewing coastal
policies; planning agency rules; and
permitting activities of the State and
federal governments. ELMS-III further
recommended that the proposed Strategic
Growth and Development Plan prioritize
coastal planning policies and define the
role of the IMC in resolving policy
conflicts. In response, the 1993 Legisla-
ture amended Chapter 380.32, F.S. by
incorporating the ELMS-III recommenda-
tions. The legislature gave the IMC the
authority to act as the principal policy
coordinating body for multijurisdictional
coastal issues.

While this is a positive change by ensur-
ing coordination and consistency among
coastal policies, there is concern that lack
of consistency may exist between coastal
and noncoastal policies where conflicts
between State goals arise.
The State Comprehensive Plan, Chapter 187, F.S. contains several goals and policies that pertain to storm and flood hazards. With the exception of Tourism, all of the State goals listed in Table 10 promote efforts to minimize development impacts on the sensitive coastal environment and protect public safety by discouraging development in coastal high hazard areas. Tourism is a major part of the economy of Florida. The implementing policy of the tourism goal to support tourism in those areas of the state desiring to attract tourists, conflicts with the other state goals because most locations attracting visitors are the coastal areas.

The 1993 legislative amendments to Chapter 186, F.S. created the Strategic Growth and Development Plan to give strategic guidance for implementing the state comprehensive plan. Among several items, the Strategic Growth and Development Plan must establish priorities regarding coastal planning and resource management, as ELMS-III recommended, and must provide guidelines for determining where urban growth is appropriate and should be encouraged. This is an

<table>
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<th>Table 10</th>
<th>STATE PLANNING GOALS AND POLICIES RELATED TO COASTAL MANAGEMENT</th>
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Tourism: Florida will attract at least 55 million tourists annually by 1995 and shall support efforts by all areas of the state wishing to develop or expand tourist-related economies. One policy to implement this goal is to promote statewide tourism and support promotional efforts in those areas of the state that desire to attract visitors.

Public Safety: Florida shall protect the public by protecting lives and property from natural and manmade disasters. Policies pertaining to this goal include the requirement that local governments, in cooperation with regional and state agencies, prepare advance plans for the safe evacuation of coastal residents and adopt plans and policies to protect public and private property and human lives from the effects of natural disasters.

Water Resources: Florida shall maintain the functions of natural systems. Policies to achieve this goal include the discouragement of channelization, diversion, or damming of natural riverine systems and encouraging development of a strict floodplain management program by state and local governments that preserves hydrologically significant wetlands and other natural flood plain features.

Coastal and Marine Resources: Florida shall ensure that development and marine resource use and beach access improvements in coastal areas do not endanger public safety or important natural resources. Policies implementing this goal include the avoidance of state fund expenditures that subsidize development in high-hazard coastal areas, encouraging land and water uses which are compatible with the protection of sensitive coastal resources, and protecting and restoring the ecological functions of wetlands systems to ensure their long-term environmental, economic, and recreational value.

Land Use: Development shall be directed to those areas which have in place, or have agreements to provide, the land and water resources, fiscal abilities and service capacity to accommodate growth in an environmentally acceptable manner. A policy pertaining to flooding is to consider, in land use planning and regulation, the impact of land use on water quality and quantity, the availability of land, water and other natural resources to meet demands, and the potential for flooding.

Transportation: Florida shall direct future transportation improvements to aid in the management of growth and shall have a state transportation system that integrates highway, air, mass transit and other transportation modes. One policy pertains to storm hazards is to avoid transportation improvements which encourage or subsidize increased development in coastal high-hazard areas or in identified environmentally sensitive areas such as wetlands, floodways, or productive marine areas.
opportunity for changes to be made in the state. Restricting coastal land development, as promoted in the state growth management legislation, is difficult in part because of the large degree of vested property in storm-prone areas. Cape Coral, the largest city in Lee County, is an example of a vested and platted community built upon very low and wet land prior to coastal management. There are over 400 miles of drainage canals throughout the city that were dredged to make the surrounding ground high enough to build upon. The platted land with its circuitous residential streets and canal system represents an area with few options for improving traffic flow and enhancing evacuation. Despite circumstances like these, many people continue to move to Florida with the intent of living on the coast or near coastal areas.

Due to the way transportation concurrency is accomplished in Florida urban areas, the provision of increased roadway capacity provides for additional development in these areas. The 1993 amendments to Chapter 339.175, F.S. designated a mobility element to include an evaluation of the capability to evacuate coastal populations prior to an impending natural disaster. The initial goal should be to minimize the need for expanding roadways and adding new corridors in hazardous areas through development restrictions. More of the true cost of coastal development, including enhanced transportation facilities for successful evacuation, should be borne by those choosing to locate in coastal areas. Development controls should be strictly enforced and subsidizing development through insurance and disaster relief should be carefully reconsidered.

Coastal communities must make difficult trade-offs between allowing waterfront development in hazardous areas, which contributes to the economy in the short run, and restricting coastal development, because of the risk to property and human life. At this time, some communities are choosing the short-run benefits of waterfront development and not applying land use planning, zoning, and other tools toward reducing the risks in flood prone areas to the extent that State goals prescribe.

While recent legislative changes resulting from ELMS-III have made strides in the recognition that restricting coastal development can help to minimize public expenditures and risks to safety and property damage, more action is needed.

The prospect of short-run economic benefits must be adequately weighed against infrastructure investments and local development decisions that will ensure community prosperity over the long run. Highway improvements that provide adequate evacuation capacity, for example, will be effective only if accompanied by development controls. It is evident that coastal communities can make fuller use of land use planning, land development regulation, and other tools to reduce the risk to the public and preserve the natural resources essential to continued tourism and long term economic prosperity.
Intergovernmental Coordination

The overriding conclusion of the many individuals interviewed for this study was that intergovernmental coordination on land use and transportation issues occurs on a staff level, but frequently deteriorates on a political level. Coordination and consistency problems across jurisdictions tended to relate to philosophical differences over how to grow, and regional competition over enhancing the local tax base. On a regional level, several officials were critical of the lack of coordination between regional planning councils and metropolitan planning organizations on land use and transportation issues.

Regional Planning Councils
Florida’s first regional planning entities were created in 1972 under Chapter 380, the Environmental Land and Water Management Act, to carry out Development of Regional Impact review. Their responsibilities included reviewing local DRI proposals, identifying any negative impacts on the region, and recommending changes to mitigate those impacts. They were also given authority to appeal development orders to the State Administrative Commission.

With the 1985 Planning and Growth Management Act, the role of RPCs was expanded. Although they retained their role in DRI review, they were also to engage in regional planning and serve as a regional forum for coordinating planning and growth management and resolving local and regional disputes (see Table 9). Under the statutory framework, regional planning councils were to facilitate intergovernmental coordination; serve as a regional clearinghouse for federally assisted projects; provide technical assistance on planning and growth management; assist with emergency management planning; set regional goals and policies; assist with DRI review; coordinate land use information and data collection; and mediate conflicts between local governments on planning and development issues.

Each RPC was to prepare a comprehensive regional policy plan that translated State goals into a regional policy framework that would guide local comprehensive planning and growth management. The plans were to address significant regional resources, infrastructure needs, other issues deemed important to the region, and regional issues for use in reviewing DRIs. In turn, local comprehensive plans were to address all regional policies relevant to local circumstances. The RPC’s role in plan review was to ensure consistency of local comprehensive plans with the regional policy framework and to address conflicts between member governments.

The role of the regional planning council in transportation planning is to develop transportation goals and objectives for the comprehensive regional policy plan. The goals and objectives, advisory in nature, are to be consistent with the goals and policies of the MPO and Florida Transportation Plan. The RPC submits the element to FDOT and the respective MPOs for consideration and comments. In turn, MPO plans and other local transportation plans are to be consistent, to the maximum extent feasible, with the regional transportation goals and objectives. In addition, RPCs review urbanized area transportation plans and submit their review comments to FDOT and the
For those municipalities outside MPO boundaries, RPCs may also assist in developing the transportation element of local comprehensive plans.

Controversy and conflict
Regional planning councils have been controversial in their role as protectors of state and regional interests. Much of this controversy relates to their appeal authority, which places RPCs in the adversarial role of blocking local planning or development initiatives deemed "not in compliance." Problems with this role are compounded by ambiguity over what constitutes a regional versus local interest and strong philosophical differences across regional and local agencies in what represents "good planning."

Common complaints of local officials and private sector representatives about the role of RPCs were that:

- RPCs have overstepped their authority to manage regional issues and have encroached upon local authority over land use;
- RPC staff have abused their appeal authority to advance their own agenda, with no political accountability;
- RPCs have set planning standards and policies that are regulatory in nature even though their statutorily defined role is non-regulatory in nature; and
- some RPC functions duplicate those carried out by DCA and local governments and should be streamlined, especially the DRI review process, which is considered unreasonably lengthy and expensive.

Adding to confusion over the appropriate role of regional planning councils is the reality that RPCs are as diverse as the communities they serve. "RPCs operate at the whim of executive directors and are subject to radically different philosophies," observed one local official. The result has been substantial variation in how RPCs perceive and carry out their statutorily defined role.

Concepts of a preferred role for regional planning councils varied with the unique circumstances and politics of each region. Providing technical assistance on planning and regulatory issues, mapping services, acting as clearinghouse for state and federal grants, emergency preparedness planning, and dispute resolution were among the preferred roles.

Several officials suggested that RPCs emphasize regional issues—like environmental protection, transportation, and economic development—and work cooperatively with local governments to devise (rather than dictate) solutions. Said one city official: "I think RPCs have to assume a different role. They shouldn't be dissolved, but..."
should transition themselves away from being a regulatory agency that hammers developers on DRIs, to an agency that facilitates and accommodates responsible urban growth. They need to become technical resources for local governments and consensus-building vehicles. They should do things like define where urban boundaries and service areas should be, and in that context you could build an effective urban transportation strategy that fits in with that vision and that consensus of where we’re going.”

Despite general dissatisfaction with the appeal authority of RPCs, some support was expressed for a regional role in development review. “We recognize that local governments are sometimes too close to the development process to be able to say no.... Regions can make the tough recommendations,” said one local official. Concerns were raised that rescinding the authority of RPCs to appeal DRIs may reduce their effectiveness in resolving disputes. “If we don’t appeal or have the right to appeal, I don’t know how we’ll effectively negotiate,” said one regional planner.

A case in point was the Southwest Florida RPC’s intervention on behalf of Punta Gorda on a proposed pipeline that would have run from Tampa to Lee County directly through the City’s watershed. Because of the RPC’s efforts, an agreement was reached to move the pipeline. In this instance, the Department of Community Affairs had taken the position that the pipeline was not a DRI and thus the problem may otherwise not have been resolved.

An advantage of RPCs is their ability to provide efficiency and economy in addressing problems common to many communities. Examples of projects or services suggested as appropriate for an RPC included preparing model ordinances; geographic information systems and mapping; development of hazardous waste management guidelines; preparing hurricane evacuation plans; assisting in development negotiations; and studies of siting locally unwanted land uses, such as landfills or hazardous waste transfer sites.

The Treasure Coast Regional Planning Council provides planning services to local governments, which typically cannot afford to retain a full range of expertise on staff—especially in the area of urban design. To accomplish this objective, the Executive Director limited the number of staff, instead focusing resources on providing high salaries to attract experienced professionals. A multidisciplinary team of experts was assembled to carry out comprehensive analysis of complex planning problems—including ecologists, transportation system planners, architects/urban designers, economists, and urban planners. “We’re the only agency that looks at problems comprehensively,” said Executive Director Daniel Cary.

The West Florida Regional Planning Council (WFRPC), which serves communities in Florida’s Panhandle, is frequently called upon for technical assistance. WFRPC serves as the MPO staff for Fort Walton Beach, Panama City, and Pensacola. Several local governments had also contracted with the WFRPC to prepare their comprehensive plans because they had no planning staff. The WFRPC works weekly with about eight communities and answers monthly requests for special projects from about four to five others. The region also assists qualifying local governments in obtaining affordable housing assistance from the SHIP program and offers to administer the SHIP program to encourage participation.

Rural counties and several of the smaller cities in Florida’s Panhandle have little local planning capacity. Holmes County,
for example, has a planning commission that meets sporadically, a building official, and one administrative assistant. In the city of Bonifay, the City Council acts as the Planning Commission and the City Clerk provides planning services. In some of these communities, the WFRPC has been called upon to perform daily planning and administration activities—including answering development questions. These activities are carried out by the region’s comprehensive planning director on the limited plan review and technical assistance budget. The cost of plan amendments has been a serious constraint.

WFRPC noted that turnover of local elected officials has caused setbacks for the planning effort, because of the need for reeducation and lack of continuity in leadership. To help fill this gap, the RPC has conducted workshops to familiarize new officials with the planning and growth management requirements. They also have established a toll free telephone number that citizens, officials, and developers can call if they have questions or issues. The outreach effort has helped generate support for planning, reduces citizen opposition, and helps build relationships between regional and local staff—a factor that staff feel has helped increase their effectiveness. They recommend a continued outreach role and additional State funding to assist with this effort.

**ELMS-III amendments**

In 1992, strong dissatisfaction with how some RPCs were interpreting their role culminated in adoption of Chapter 92-182, authorizing the legislature to “sunset” RPCs as of September 1, 1993. ELMS-III and ACIR were charged with reviewing the role of RPCs and either to address the legislative proposal to sunset them entirely, or recommend statutory changes to enhance that role. The recommendations of ELMS-III, resisted sunsetting RPCs and instead revised their role. The emphasis was on eliminating the quasi-regulatory functions of RPCs and instead emphasizing their role in promoting intergovernmental coordination, ensuring regional consistency of land use and transportation planning, and mediating planning and development disputes.

The amendments prohibited RPCs from performing quasi-regulatory functions or setting binding level of service standards for local facilities. RPCs retained authority to propose objections, recommendations, or comments on local plans or plan amendments, but may no longer directly appeal DRI development orders and their role in DRI review was restricted until the DRI process is terminated. The new review criteria provide that RPCs may only address state and regional resources and impacts on adjacent jurisdictions in review of DRIs. The amendments provide an expedited review process for those DRI’s deemed consistent with the local comprehensive plan, limit requests for additional data from the RPC to two, and require a public hearing on the project within 90 days after the RPC issues a notice.

The regional policy plan has been redefined as a strategic rather than comprehensive planning document. The plan must address affordable housing, economic development, emergency preparedness, natural resources of regional significance, and regional transportation. RPCs must identify the location of regionally significant natural resources and other issues may be included at the discretion of the RPC. Planning standards must be adopted by two-thirds vote of member governments and may be used for planning purposes only—not for permitting or regulatory purposes.
Strategic regional policy plans must contain regional goals and policies that address regional transportation. The RPC's role in transportation planning was defined as:

- coordinating land development and transportation policies in a manner that fosters region wide transportation systems, and
- reviewing plans of independent transportation authorities and MPOs to identify inconsistencies.

In addressing regional transportation, the RPCs were encouraged to:

recommend minimum density guidelines for development along designated public transportation corridors and identify investment strategies for providing transportation infrastructure where growth is desired, rather than focusing primarily on relieving congestion in areas where growth is discouraged. (Section 186.507[12])

RPCs were required to expand their membership to improve coordination between land use, environmental issues, economic development, and transportation planning at a regional level. The Governor must appoint ex-officio representatives of FDOT, the Department of Environmental Protection, and the Department of Commerce to the membership of the RPCs and may, but is not required to appoint, ex-officio members of the MPO and regional water supply authorities.

RPCs are required to carry out a "cross acceptance" process for addressing inconsistencies between the regional policy plan and local comprehensive plans. Consistency between plans may be achieved through a process of negotiation involving the local governments or the regional planning council that prepared the respective plans. RPCs must also establish, by rule, a formal dispute resolution process that attempts to resolve disputes through voluntary meeting, before progressing to mediation, arbitration, or administrative or judicial action. The legislation provides that RPCs should not be involved in addressing disputes involving environmental permits and other regulatory matters, but instead should focus on planning issues.

**Conclusions**

The success of Florida's planning and growth management framework depends upon the capacity of local governments to plan. RPCs could help build this capacity by collecting and providing high quality land use, socio-economic, and environmental data. Awareness of regional trends and conditions, access to data and information, and the ability to build broad-based expertise make RPCs a valuable resource for assisting with the local planning and growth management process.

Among the services most needed are mapping, urban design, and assistance with developing regulatory approaches for various purposes. Nowhere is the economy of providing services at a regional level more apparent than in the area of geographic information systems (GIS)—computerized mapping systems that are expensive to purchase and operate. Many of the plans reviewed for this study had maps of poor quality or at such widely different scales their utility for planning purposes was negligible.

A recent survey of GIS capabilities among regional planning councils in Florida found that five RPCs had complete GIS systems (PC ARC/INFO), but data bases were of varying quality and few had complete land use coverage information. There was a general lack of standardization in the type of data collected and the way it was categorized and maintained.42
RPCs should continue to build their geographical data bases and enhance their capacity to provide GIS mapping services in a region. This information would be much more easily updated than hand drafted maps because it is already computerized. Furthermore, maps could be printed out at any scale for overlay purposes. If standardized, this information would raise awareness of local and regional development trends and enable local officials to make more informed planning decisions. RPCs should also be encouraged to conduct research on alternative regulatory approaches for local governments and prepare sample regulations to assist them in carrying out their land development goals.

RPCs must develop more effective ways to coordinate planning and development decisions across jurisdictions—a role that the new ELMS legislation has emphasized. The ELMS-III Act moved to enhance the RPC's role in coordinating land use and transportation, yet fell short of requiring MPO membership in the RPC. Separation of regional land use and transportation planning between RPCs and metropolitan planning organizations (MPOs) could hamper regional coordination efforts. Collaborative planning efforts and formal coordination between MPOs and RPCs would be appropriate given ISTEA's emphasis on a more comprehensive approach to congestion management.

**Metropolitan Planning Organizations**

A shift in transportation decision authority has occurred in metropolitan areas of 200,000 persons or more, designated as Transportation Management Areas. In a move designed to increase local leverage and strengthen regional coordination, ISTEA transferred authority for prioritizing transportation investments in large metropolitan areas from the state DOT to the MPO (Section 134 [i]). MPOs that served in primarily an advisory capacity in the past, will now face the challenge of coordinating a regional transportation policy and vision, setting priorities, and making difficult funding trade-offs. MPOs that had already assumed a leadership position, will now have greater authority in advancing their vision.

The rapidly growing Orlando metropolitan area, for example, is pushing for a plan that embodies a shared vision of the region's transportation future. Toward this end, area officials formed a transportation roundtable to evaluate coordination of the regional transportation network. The forum is co-chaired by the Mayor of Orlando and the chair of the Orange County Commission and comprises adjacent Osceola and Seminole Counties, and high level representatives of area transportation agencies including the Greater Orlando Aviation Authority, Tri-County Transit (LYNX), Florida DOT, the Expressway Authority, and the Commuter Rail Authority.

The first product of the roundtable is a plan representing the region's future land use and transportation system as contained in adopted local future land use and agency transportation plans. The objective is to build public confidence in regional transportation planning efforts and regional support for a comprehensive, multi-agency strategy, thus enabling the continued availability of local funds and improving performance in obtaining State and federal funds.

The regional coordination challenge is especially great where multiple MPOs have been designated in a single metropolitan area. Although ISTEA requires coordination, it leaves the decision on planning area boundaries up to the Governors. Under ISTEA, "More than one MPO may be designated within an urbanized area as defined by the Bureau of the Census only if the Governor..."
determines that the size and complexity of the urbanized area make designation of more than one MPO for such area appropriate" (Section 134(b)(6)). Where MPOs are permitted to coexist in a metropolitan area, they must consult each other and FDOT to coordinate plans and programs.

To reduce the potential for uncoordinated planning, many advocate consolidation of MPOs in such regions into a single planning agency. The high growth Tampa-St. Petersburg metropolitan area in Florida, for example, contains four MPOs—one for Hillsborough, Pinellas, and Pasco counties, and a newly formed MPO for Hernando County. Suggestions to consolidate these under a single metropolitan planning organization have met strong opposition. Arguments against consolidation have centered largely on home rule concerns. Each of the MPOs has argued that sub-regional MPOs are closer to the citizens and have a better ability to trade-off community and transportation goals. Alternatively, it has been argued that county-based MPOs are likely to short-change regional transportation projects, in favor of local concerns.

Instead of merging across jurisdictions, MPOs in the Tampa Bay Area have established a Joint Coordinating Council and formal mechanisms for coordinating planning efforts. As a condition for approval, Governor Chiles further required that each MPO within the transportation management area (Hillsborough, Pinellas, Pasco) develop a joint long range plan, congestion management system, a coordinated project selection process, and a coordinated air quality planning process.63

This may be sufficient, but a regional MPO would reduce redundancy in planning efforts. Separating MPOs by county lines also increases the likelihood that parochial politics will interfere with regional planning goals. The Tampa-St. Petersburg area, for example, operates as an interdependent, regional transportation system. The two jurisdictions, in Hillsborough and Pinellas counties, also compete vigorously for economic development. The concern is that county-based MPOs may begin to resemble arms of County government more than unbiased coordinators of the metropolitan planning program. The Governor has given the Tampa Bay area two years to demonstrate whether these county MPOs can effectively coordinate and develop a unified regional transportation plan.

Although regional consolidation may be desirable, it is not sufficient to assure coordination among member governments. The divisiveness of regional politics will remain a barrier to achieving regional consensus on transportation and ultimately land use issues. But given the trade-offs, local governments can make under the more flexible funding guidelines, metropolitan areas may find ways to get along. Communities most likely to capitalize on ISTEÀ will be those with a regional transportation vision and plan in hand. Those who can't agree may be left empty handed.

Organizational Boundaries

Overlapping boundaries have increased the difficulty of coordinating transportation and land use planning efforts, due to inconsistency of service areas of different agencies that deal with transportation or land development issues. The Tampa Bay Regional Planning Council, for example, deals with Hillsborough, Pinellas, Pasco, and Manatee counties, a region that comprises five different Metropolitan Planning Organizations and two FDOT district offices (see Figure 5). In other cases, one MPO may serve more than one county but be spread across two different FDOT districts.
Another problem arises from the way FDOT district boundaries have been drawn. FDOT District 6 encompasses Dade and Monroe counties, while District 4 includes Broward, Palm Beach, Martin, St. Lucie and Indian River counties. Journey-to-work data from the 1990 U.S. Census reveal that a strong regional tie exists between Palm Beach, Broward and Dade counties, yet they are in two different FDOT districts. In fact, much of the commuter assistance work being carried on in District 4 is an attempt to mitigate travel into District 6.

All of these problems are compounded if transportation improvements impact other areas, like the environment or human service agencies. These agencies have boundaries set up based on their particular needs, which often transcend transportation issues. For example, the Southwest Florida Water Management District covers a large area that encompasses four separate DOT districts, and five different Regional Planning Councils.

The underlying question associated with boundary issues is one of regionalism and consistency. Most transportation planners agree that regional travel has a great impact on our transportation network. To mitigate impacts, regional solutions are required. However, in many areas, decisions that impact regional travel are being made strictly based on local objectives. This undermines the need to preserve regional mobility on the state highway system and gives rise to the need for a consistent regional approach. Agency boundaries should be reevaluated to reduce service area inconsistencies and help facilitate better regional coordination.

Figure 5
AGENCY BOUNDARY OVERLAP, TAMPA BAY AREA

- FDOT District 7
- Southwest Florida Water Management District
- Metropolitan Planning Organizations
- Tampa Bay Regional Planning Council
**Developments of Regional Impact**

Some land uses, because of their size, character, or location, have impacts that extend far beyond the development site. A regional mall stimulates spin-off growth in the surrounding area and, depending upon its location, may burden the infrastructure and service capacity of several communities. Airports, power plants, stadiums, large residential developments, theme parks, and major resorts are also among this category of land uses with impacts that may extend far beyond a local government’s boundaries.

The Development of Regional Impact process is a mechanism for balancing local interests in reviewing large scale development projects, with regional and state concerns. It requires local governments to evaluate regional impacts of large development projects—including environmental impacts, the effects on regional public facilities and services, and the burden on area taxpayers—in the development review process. In turn, it expands participation in development review to affected State agencies, and to other communities in the region through the Regional Planning Council.

A DRI is defined in Florida Statute as “any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county” (Section 380.06, F.S.). Although it focuses on cross-county impacts, municipalities within the county adjacent to the development site may require their concerns be addressed in the DRI application and review process.

The Growth Management Act of 1985 amended Chapter 380, F.S. to establish thresholds for determining whether a proposed project should be considered a DRI. Although the thresholds are numerical standards, some room for discretion was provided. Developments below 80 percent of the numerical threshold were to be excluded from consideration, and those above 120 percent of the threshold were included. Those between 80 and 120 percent might be considered a DRI depending upon individual project characteristics. Projects in this gray area may request a binding letter of determination from the Department of Community Affairs on whether they should or should not be considered a DRI for review purposes.

**The review process**

The review process begins with a preapplication conference with the developer and Regional Planning Council. The RPC invites representatives from all affected state and federal agencies, as well as representatives from adjacent local governments. This conference determines what information the developer must provide; other agency permits required; regional issues; and officials from adjacent communities may express concerns they would like addressed in the application.

Applications typically document how the project will impact the environment, natural resources, historic and archaeological sites, the economy and fiscal resources, transportation, wastewater and solid waste disposal, drainage and water supply, energy, education and housing, police, fire and emergency services, and recreation and open space. These applications are the primary source of data and analysis for evaluating the proposal.

After completing the application, copies are submitted to the local government, the Regional Planning Council, and DCA for formal review.

Other agencies that request copies also may review them. If the RPC determines that the application is complete and sufficient for review, it notifies the local government of sufficiency. The determination of sufficiency may involve several
requests for additional data. The local government then schedules a public hearing, giving at least 60 days advance notice. The RPC has 50 days to review the application, hold a public hearing, and submit a report with recommendations to the local government. It may recommend approval, approval with conditions, or denial.

The local government must take action on the application within 30 days of holding a public hearing. The development order is reviewed by the developer, the RPC, and DCA and, within 45 days of issuing the order, the RPC or DCA may appeal the order to the Florida Land and Water Adjudicatory Commission. This right to appeal provides "teeth" to the RPC's recommendations. Standing to appeal is also given to the developer and a property owner within the defined planning area. A vote to appeal often prompts a negotiation process to settle the dispute before reaching the formal hearing.

Once a project is approved, development rights conferred on the project are vested according to the conditions set forth in the development order. If the developer then wishes to change the project, and that change is substantial enough to warrant additional review, then it is deemed a "substantial deviation" and must undergo further DRI review. Substantial deviations are defined in Chapter 380 through both discretionary and non-discretionary standards.

**Pros and cons of the DRI process**

Proponents of the DRI process argue that it provides for a more thorough review of large scale development than would otherwise occur, given limited resources and the inadequacy of local data--especially in smaller communities and rural areas. It provides adjacent counties and affected agencies a stronger voice in guiding the development decision process for projects that could have a major negative impact on regional resources, infrastructure, and growth management efforts. As communities grow and push against each other's boundaries, a strong mechanism for managing regional impacts and arbitrating regional disputes is essential.

Critics of the DRI review process say it is unreasonably lengthy, expensive, and duplicates other regulatory efforts. The cost of processing a DRI may range from $250,000 into the millions. Because regional planning councils have not been limited in the amount of data they may request of applicants for a sufficiency determination, the DRI process often takes several years--despite strict time limits in the act. The Department of Community Affairs and Regional Planning Councils have been accused of using the DRI process to address shortcomings in the local comprehensive plans--placing developers in an untenable position.

The quantitative thresholds are called inequitable, penalizing large development projects with a cumbersome review process while disregarding the cumulative--and often more damaging--impacts of "sub-threshold" projects. Some communities have also used the process to impose excessive exactions in return for development approval.

The role of Regional Planning Councils in the process has been another source of contention. RPCs have been accused of overstepping regional considerations in the DRI review process to interfere with local development decisions. Nonetheless, given the sweeping scope of State growth management policy, the line between local and state or regional considerations is seldom clear. Confusing the issue is the fact that some communities have relied on regional planning staff for technical assistance during local DRI review or in negotiating conditions for approval. Regional planning staff may be
torn between the role of “consultant” and “watchdog” where local and regional objectives diverge.

Efforts to provide alternatives to the standard DRI process have had varying success. The Florida Quality Development program was to provide expedited review for DRIs that advanced State goals, but has proven equally lengthy. The “little DRI” alternative permitted transfer of DRI review from regional agencies to counties, yet no county ever filed for certification.

One alternative that has been effective is the downtown DRI or areawide DRI process. This process permits a local government or developer to file a DRI application for a large geographic area or downtown. Once approved, all future development consistent with the development order may proceed without regional review. Downtown and areawide DRIs have been useful in guiding planning and permitting of development and redevelopment in downtowns and activity centers and have reduced delays associated with review.

**Changes to the DRI program**

Broad dissatisfaction with the DRI process and the role of RPCs in DRI review resulted in a decision by ELMs-III to phase out the DRI program. In its place, local governments must adopt an intergovernmental coordination element that provides method of reviewing and approving development with impacts on more than one jurisdictions. The element must be adopted by December 31, 1997. Once it is adopted, the local government may opt out of the DRI program. Small counties (less than 100,000 persons) and cities (2500 or less) may opt to retain the DRI program.

The intergovernmental coordination element must establish an alternative process for addressing issues managed through the DRI process. This includes:

- a process to determine if development proposals would have significant impacts on other local governments, state or regional resources or facilities identified in the state and regional plan;
- a process for mitigating extrajurisdictional impacts, with an option for regional mitigation;
- a dispute resolution process for timely resolutions of disputes pertaining to development proposals that impact adjacent areas;
- a process for modifying development orders that is consistent with the local plan policies and preserves recognized development rights; and
- a procedure to identify and implement joint planning areas—especially for annexation or joint infrastructure service areas.

In addition, each county, municipalities within that county, school board, and service providers must establish, by interlocal or formal agreement, joint processes for collaborative planning and decision making on the location and extension of public facilities subject to concurrency. A deepwater port may opt out of the DRI review program if it successfully completes an alternative comprehensive development agreement with a local government.

In the interim—and for jurisdictions that remain in the program—the DRI process has been amended. DRI thresholds were revised to reduce barriers to infill, encourage a higher proportion of residential development in mixed use projects, and promote compact development, and facilitate hotel and resort projects that will serve existing convention centers. The revised thresholds apply only to urban central business districts and regional activity centers, and were increased:
• by 50 percent for residential, hotel, motel, office, and retail developments;
• by 100 percent for mixed-use developments—provided one land use of the mixed use development is residential and “amounts to not less than 35 percent of the jurisdiction’s applicable residential threshold”; and
• by 150 percent for resort or convention hotel developments—provided the proposed resort or convention hotel is located in a county with a population greater than 500,000 and the hotel or resort will serve a convention center built before July 1, 1992, that is larger than 250,000 gross square feet.

These changes do not take effect until December 1, 1993, when the Administration Commission (upon recommendation of DCA) must adopt administrative rules defining, among other things, what qualifies as an urban CBD and regional activity center. The Department of Community Affairs was also directed to prepare a report and recommendations regarding DRI issues addressed by the ELMS-III Committee. Among these are changes that increase the importance of character and location, and decrease the significance of magnitude, when determining whether a proposed development is a DRI. The report should also address, if necessary, creation of new categories.

Developers are now permitted to initiate a comprehensive plan amendment related to a proposed DRI. Local governments must consider the DRI application and plan amendment at the same public hearing. Thereafter, the appeal process for the DRI must follow Chapter 380 and the compliance process for the plan amendment must follow requirements of Chapter 163. New provisions also specify that if a developer proposes to abandon a DRI and has not developed the site, and will not develop the site after abandon-

ment, then the owner or developer need not contribute any land, funds, or public facilities as a condition of abandonment.

If the local government certifies that a DRI proposal is consistent with the local comprehensive plan, then the developer may qualify for expedited review. This would consist of:

• a short application form to be promulgated by DCA by rule;
• a limitation on sufficiency of information requests—the RPC may request additional information no more than twice, unless the developer waives this limitation (10)(b); and
• a limitation on the time for setting the local public hearing—no later than 90 days after the RPC issues notice that a public hearing may be set, unless waived by the developer.

Several changes were made to the requirements for regional review. The RPC is to evaluate the application to determine the impact it will have on state or regional resources or facilities identified in applicable state or regional plans and whether it will significantly impact adjacent jurisdictions. At the request of an adjacent local government the RPC may review and comment upon issues specific to that community. The list of specific issues for regional review was eliminated, except for the requirement that the RPC evaluate whether the project will favorably or adversely affect the ability of people to find adequate housing reasonably accessible to their place of employment.

RPCs may no longer promulgate rules to guide the DRI review process and instead are subject to rules of the Department of Community Affairs. These will be uniform statewide standards for DRI review and must be promulgated within six months of the effective date of the bill. At the request of the RPC, DCA may
adopt by rule different standards for a specific planning district, where the statewide standards is found inadequate to protect or promote the regional interest at issue.

“Substantial deviation” refers to whether a proposed change in a project is so substantial that the project must go through another DRI review. The ELMS-III Act prohibits RPCs from appealing a local government’s determination regarding substantial deviation, but this right of appeal remains with the Department of Community Affairs. Changes to determination of vested rights clarify that projects demolished and reconstructed within the same approximate footprint of a previously vested project, remain vested—provided the change does not constitute a substantial deviation under Section 380.06(19)(b).

DCA retains the right to appeal developments that would have required DRI review even though the program has been terminated. Developers may request a binding letter of interpretation to determine whether their project may be subject to such an appeal.

Conclusions
The DRI process has provided a mechanism for reviewing land uses with impacts that extend far beyond the development site. It required local governments to address the negative externalities of major land use decisions on neighboring communities, regional infrastructure and service needs, and the environment.

Complicating this intent, however, is the reality that the DRI process has been used to facilitate local planning and regulation as well as to address regional impacts. The ELMS-III report notes that when the DRI program was created in 1972, less than half of Florida’s land area had any land use regulation and few of those codes had any basis in a local comprehensive plan. Thus, the DRI process was a stopgap measure—intended to serve both the need for regional impact review and fill the void of planning and land development regulation during a period when Florida was experiencing its first wave of growth.

Now that the comprehensive plans are largely complete and land development regulations are in place to guide future development, it seems appropriate to phase out the DRI review process and instead focus on strengthening the quality of local planning programs. It is also appropriate to provide for an option to retain the process in small or rural communities that may not have adequate planning capacity.

It is important to recognize, however, that the DRI process and comprehensive plans are not necessarily interchangeable. The DRI process is a tool for project impact analysis and results in development order conditions, whereas a comprehensive plan amendment addresses whether the community is ready for or desires growth in that area. Communities that phase out the DRI process must ensure that development review requirements of their land development code are adequate.

Past separation between comprehensive plan amendment applications and DRI applications has created timing problems—when a DRI does not comply with the comprehensive plan, the application gets held up in the appeals process. New provisions for a consolidated application for both the comprehensive plan amendment and the DRI will help address this problem. It is also recommended that the Department of Community Affairs designate teams to evaluate these applications together, rather than in separate divisions as is currently the case.

ELMS-III revisions aimed at bolstering the intergovernmental coordination process.
and providing for joint infrastructure areas have addressed many of the issues that DRIs were intended to address. Nonetheless, there are certain features of the DRI process that may not be adequately addressed through the intergovernmental coordination requirements. Key among these is that the DRI process has been the most effective way of coordinating provision of capital improvements with development of large scale projects on a regional basis. Concurrency does not cross borders and in some respects DRIs have been more effective than concurrency in balancing infrastructure supply and demand.

How will the multi-jurisdictional impacts of large projects be assessed? DRIs result in more detailed collection and analysis of data than otherwise would be available for consideration during development review. What motivation is there to ensure that the impacts of a development on local governments other than the host government are adequately addressed? It is uncertain whether communities will acknowledge those externalities and voluntarily share in the regional costs of large projects.

**Dispute Resolution**

From a transportation perspective, disputes between State and local governments or between jurisdictions have arisen from growth management requirements that plans be consistent across jurisdictions and with State and regional policies, and that adequate public facilities be in place to support development.

Disputes between local governments and the Department of Community Affairs on transportation issues frequently involve locally adopted level-of-service standards for roadways and plans for future facility expansion as set forth in the transportation element of local comprehensive plans. A determination that local plans were not in compliance with either the State or regional plan, resulted in disputes over whether state planners could fairly assess “consistency” of the local plan with State policy and growth management requirements. The gist of the argument: how can a state agency adequately understand local transportation issues so that all conflicts are appropriately resolved?

Conflicts and disputes between local government generally develop in one of two broad category areas. The first is in problems with differing viewpoints and approaches to roadway characteristics. For example, Gulf Boulevard in Pinellas County, the only north-south arterial along the County’s barrier islands, goes through several changes from two lane roadway to two lane with center turn lane to four-lane undivided to four lane with median divider.

However, the road does not progress from one type to the next in the hierarchy but from two lane to four lane back to two lane to four lane. These areas get highly congested during tourist season and suffer from virtual gridlock on some weekends during the year. Compounding the problem is the inability of some of the affected jurisdictions to correct the roadway because no future right of way was established and development has occurred at the edge of the roadway.

Concurrency has also given rise to intergovernmental disputes. The reliance on level of service standards forces communities in metropolitan core areas or along major traffic thoroughfares, to limit development because they have exceeded their level of service standard. Yet rapid growth in surrounding communities may be the primary cause of degradation of the core communities level of service (see chapter on Concurrency).

**State mandates**

In response to Florida statutes, the Department of Community Affairs adopted Rule 9J-5, which spells out the
minimum criteria to be used by DCA in review of local comprehensive plans. Of particular interest, in regards to transportation, are Section 9J-5.007 dealing with the traffic circulation element and Section 9J-5.008 dealing with the mass transit element.

Section 9J-5.007(2)(b) requires consistency between local analysis of projected traffic circulation levels of service and system needs based upon the future land use map, and regional or State plans as follows:

In addition, this analysis shall consider the adopted level of service standards, improvements, expansions, and new facilities planned for in the Florida Department of Transportation Five-Year Transportation Plan and the plans of the appropriate metropolitan planning organization and should, to the maximum extent feasible as determined by the local government adopting the local comprehensive plan, be compatible with the policies and guidelines of such plans.

Under requirements of 9J-5.007(3)(b), local governments must also:

coordinate with the plans and programs of any appropriate metropolitan planning organization, any public transportation authority, any appropriate resource planning and management plan prepared pursuant to Chapter 380, Florida Statutes, and approved by the Governor and Cabinet, and the Florida Department of Transportation’s Five-Year Transportation Plan.

Both provisions require coordination and, where appropriate, consistency. However, while discretion in determining consistency is left to local governments, ultimately it is the Department of Community Affairs that must determines if requirements for coordination and consistency have been met. Local governments may have considered the appropriate plan, and, in their view, have made their plans compatible to the "maximum extent feasible." The Department of Community Affairs or regional planning agency have not always agreed and the result has been a conflicts or disputes that may take considerable effort to resolve.

The sections of 9J-5 that deal with projected local mass transit needs based upon future land use plans have similar wording. Specifically, 9J-5.008(2)(b) requires:

In addition, this analysis shall consider the adopted level of service standards, improvements, expansions, or new facilities planned for in the Florida Department of Transportation Five-Year Transportation Plan and the plans of the appropriate metropolitan planning organization and should, to the maximum extent feasible as determined by the local government adopting the local government comprehensive plan, be compatible with the policies and guidelines of such plans.

Section 9J-5.008(3)(b)(2) states that mass transit elements must:

coordinate with any mass transit plans or plans for transportation disadvantaged people, with the appropriate metropolitan planning organizations, or public transportation authority, or the Florida Department of Transportation Five-Year Plan.

As with traffic circulation element rules, these criteria have resulted in conflict between local governments and the Department of Community Affairs or regional planning agencies, especially where local objectives diverge from those of other mass transit providers.

Section 163.3184 of the Florida Statute sets forth the process for review of local comprehensive plans. The process calls for review by appropriate state and regional agencies. This section also details the process for mitigating discrepancies between local plans and regional or State plans and puts the burden on State and
regional agencies to show a preponderance of evidence to suggest the plan is not in accordance with regional or State plans. If after deliberation the outcome is still debatable, then the local plan must be found in compliance.

Section 186.509 of the Florida Statutes mandates that the Regional Planning Council shall establish an informal mediation process to resolve conflicts between local governments relating to comprehensive plans. The term "informal" has been interpreted in a variety of ways by regional councils; however, given regional variation and practices, this may in fact be a good solution.

Finally, Section 380.07 of the Florida Statutes provides for a formal dispute resolution process for disputes that arise from Developments of Regional Impact. Section 380.07, F.S. represents the only State statutory guidelines to develop formalized dispute resolution guidelines for conflicts arising from growth management issues.

**ELMS-III solutions**

The ELMS legislation detailed specific changes to try and mitigate some of these disputes. This included an important role for regional planning councils in the dispute resolution process. Specifically, the majority of legislation that deals with dispute resolution is found in section 30 and 35 of the ELMS bill.

Section 35 of the ELMS bill states that:

*Each Regional Planning Council shall establish a dispute resolution process to reconcile differences on planning and growth management issues between local governments, regional agencies and private interests.*

Further, the ELMS bill requires regional planning councils to conduct a cross-acceptance process with local governments regarding inconsistencies between local and regional plans.

This process would involve an analysis of conflicts between local and regional plans which would then be provided to the local government as a form of technical assistance prior to the preparation of the Evaluation and Appraisal Report.

New Jersey's cross acceptance program consists of a process of negotiated consistency, based on voluntary cooperation. The first step is to compare plans to identify inconsistencies. The second step allows for negotiation between State and local officials. The third step is the resolution of conflicts through revisions to the planning documents. Throughout the process, trained mediators participate in discussions to assist in the resolution. The move toward a "cross acceptance" process should go far in addressing compliance disputes between state and local government and help strike a better balance between State, regional, and local planning goals and issues.

The ELMS bill also calls for a stronger role for Regional Planning Councils in addressing regional transportation issues and to help coordinate land use and transportation policies so that they foster a region wide transportation system. As part of the legislation, ELMS requires the Regional Planning Councils to identify inconsistencies among local comprehensive plans and develop a dispute resolution process to resolve any differences.

Another important component of the ELMS legislation is the provision for mitigating intergovernmental disputes. Under the intergovernmental coordination provisions, the ELMS requires a process for mitigating extrajurisdictional impacts in the jurisdiction in which they occur in accordance with the local plan of the impacted community, with an option for regional mitigation when preferable. In addition, the bill also requires a dispute resolution process specifically for development proposals that would have
impacts on adjacent communities or identified state and/or regional resources or facilities. Finally, the ELMS legislation requires that each local plan identify and implement joint planning areas to facilitate better coordination of development impacts.

Interviews with local officials conducted as part of this project point to the reasons why the ELMS-III committee devoted so much time to this issue; every interviewee mentioned the need for State and regional agencies to recognize their uniqueness and be flexible in disputes. The ELMS legislation, as stated earlier, has provided the framework necessary to allow each region to develop an appropriate conflict resolution process. It is now up to the regional and local agencies to develop a workable and equitable process.

Conclusions
Achieving a balance between competing goals is difficult. In some respects, it may be impossible to ensure “complete consistency” among all the elements of a local plan, let alone consistency between jurisdictions and between State, regional, and local plans. Some policies contain inherent conflicts that cannot be readily resolved and communities will be forced to choose between one perspective or another. The push to enhance Florida’s tourism potential and the push for limits on coastal development are one example of conflicting goals. Planning remains an effort to strike a better balance between competing goals—a decidedly political process. In this context, complete consistency may remain an unachievable ideal.

State mandates for local planning are also complicated by a general lack of agreement in the planning profession over what constitutes a good plan or planning process. The Department of Community Affairs has been placed in the difficult position of sorting out the terms of “quality” planning. In a commentary on state planning mandates, Susskind warned that mandatory planning guidelines tend to either be “too vague to be instructive or enforceable or too specific to be sensitive to local variations.” He concluded that efforts to regulate the style and substance of local planning are constrained by the reality that plans and planning process must be responsive to local politics and must engender participation. Instead, State mandates tend to engender a defensive response, transforming the planning motivation from a shared sense of purpose to one of reluctant compliance—with a decidedly different outcome in terms of local support. These issues have all surfaced in Florida’s effort to promote growth management.

Florida did not make the decision to mandate growth management lightly, however. The planning and growth management mandates emerged from broad-based consensus that something must be done to prevent the “worst” from occurring. The problems from a pre-growth management era still loom large across Florida’s landscape. Clearly, however, it remains a local prerogative to ensure the “best.” The ELMS-III amendments to the growth management requirements have provided the flexibility—and the regulatory authority—for this to occur.
Conclusions and Recommendations

The conclusions and recommendations of this study are derived from issues discussed in more detail in previous chapters, and reflect concerns raised by the many local, regional, and State planning officials and other interested parties interviewed over the course of this study. Some of these recommendations address issues of practical concern in planning practice, including the need for technical assistance programs and planning support services for local governments. Other recommendations address the policy intent of the Intermodal Surface Transportation Efficiency Act of 1991, the Florida ISTEA Act of 1993, and Florida's growth management requirements, as amended by ELMS-III in 1993.

Land Use Planning Practice

Recommendation 1: The ELMS-III legislation has required that State and regional policy planning be more strategic. This study strongly supports this recommendation. It is further recommended that the Department of Community Affairs should be strategic in evaluating compliance with state policy. Rules should continue to clarify performance objectives, but in evaluating compliance the Department should focus on specific strategic issues of state and regional concern, as identified in the state and regional strategic plans.

State mandates for local planning are complicated by a general lack of agreement in the planning profession over what constitutes a good plan or planning process. In a commentary on State planning mandates, Susskind (1977) warned that mandatory planning guidelines tend to either be "too vague to be instructive or enforceable or too specific to be sensitive to local variations." He concluded that efforts to regulate the style and substance of local planning are also constrained by the reality that plans and the planning process must be responsive to local politics and must engender participation.

These issues all have surfaced in Florida's effort to promote growth management. The Department of Community Affairs has been placed in the often untenable position of sorting out the terms of "quality" planning. Although the policy intent of the growth management requirements is widely supported by many local officials, there is a general perception that the compliance review process has suffered from "micromanagement" of local planning. The most common concerns are that State policies and rules are either too vague and discretionary to instruct local governments (and thus are also difficult for the State to enforce), or too prescriptive to be relevant in terms of variation in local needs. As a result, the compliance process, transformed the planning motivation from a shared sense of purpose to one of reluctant compliance—with a decidedly different outcome in terms of local support.

The planning and growth management mandates emerged from broad based consensus that something must be done to prevent the worst. But as State growth management requirements are refined, a more strategic approach to determining compliance would be desirable to encourage the best in local planning. The burden of demonstrating compliance with
vague or overly prescriptive planning requirements can ultimately discourage innovation. State growth management policy faces the continuing challenge of finding and enforcing those policies of greatest strategic concern. The ELMS-III committee has moved in this direction and the legislature has shown vision in demonstrating continued support for growth management by adopting the majority of the ELMS-III recommendations.

Recommendation 2: Although socio-economic forecasts, current densities, and current land use ratios are useful indicators of growth trends, local governments should be discouraged from relying too heavily on them in determining future land use needs. Plans should move toward a vision of the community's desired future and greater emphasis should be placed upon action strategies for achieving that vision. Toward this end, this study strongly supports the ELMS-III amendment to Section 163.3191, F.S., encouraging local governments to use the Evaluation and Appraisal Report to develop a local vision that could serve as a basis for revising the local comprehensive plan. This should be provided for in Rule 9J-5.

Concerns have been raised that many local comprehensive plans lack vision. Some of this may be related to the heavy emphasis in Chapter 163, F.S., and the Model Future Land Use Element, on socioeconomic forecasting in determining future land use needs. Although population and future land use forecasts are helpful in developing a future land use plan, less emphasis is being placed on them in planning practice than was previously true. In a guidebook on modern planning practice, Wyckoff (MSPO 1992) identified several reasons for this. First, projections are based on past trends and assumptions that are subject to tremendous uncertainty. If the plan relies too heavily on this method and projections are flawed, then it would require substantial and costly revision. Second, communities that wish to diverge from past trends should not depend on this method to determine future development patterns. Third, contemporary planning has become increasingly participatory as communities strive to establish a common vision of how they want to grow. In contemporary planning practice, concluded Wyckoff, projections are viewed as an “early warning, monitoring, and planning tool, rather than the central foundation of the plan.”

Recommendation 3: Chapter 163, F.S. should require local governments to consider alternative future land use scenarios based upon goals, objectives, and policies of the comprehensive plan. In developing or updating the future land use plan, local governments should clearly identify where the current plan and regulatory program (i.e., zoned use and densities) will eventually lead in terms of a buildout scenario. This should also be done on a countywide basis or multi-county basis as a method of developing a vision for the region’s future growth and development.

State planning requirements should require communities to evaluate alternative land use scenarios in preparation of the future land use map. One method of encouraging greater attention to vision in the planning process is through mapping buildout, as it is currently prescribed in terms of local zoning buildout. If this is done on a countywide or multi-county basis, it will provide a visual picture of where the region is heading based on the current planning and regulatory program. This will facilitate identification of potential problem areas and development of alternative scenarios. An example is the approach used in the Palm Beach County
and Martin County Urban Form Study, described in the fourth chapter of this report.

Recommendation 4: The ELMS-III legislation recommended that the Department of Community Affairs serve as a clearinghouse for providing information on visioning and to provide grants to encourage local governments to develop a vision. As part of this effort, the Department of Community Affairs should initiate a study of future land use planning methods, to result in a guidebook on preparing and updating a future land use/growth management plan. This would replace the Model Future Land Use Element and would also provide methodological guidance on how to incorporate “vision” into the future land use planning process.

Recommendation 5: Local governments should discourage large single-use land areas. Land use needs should be evaluated not only community-wide, but also on a neighborhood basis. Rule 9J-5 should clearly emphasize these considerations. The proposed rules on urban sprawl are moving in this direction.

Many Florida communities, particularly those built since the 1960s, are characterized by large expanses of single-family residential development served primarily by commercial corridors. This trend has been exacerbated by the rigorous separation of residential and nonresidential activity. The larger challenge of managing growth cannot be met solely by addressing problems relating to the amount of land allocated, but must also address the land use mix. Plans should require a mix of land uses and services needed to create functional, livable neighborhoods where residents can “live, shop, work and play.” This will require increasing attention to performance zoning, neighborhood planning, and urban design initiatives that have proven highly successful in creating a better quality of life through the built environment.

It should be clarified that the push for provision of higher density, mixed use neighborhoods is not a push to replace single family housing. Rather, it is an effort to increase choice in the housing market. Large lot, single family residential development has been the dominant residential land use form since World War II. Yet while single family housing is still the housing of choice for many Americans, especially families with children, it is essential to maximize choice in the housing market. The demographics of American society are changing and groups such as the elderly, “empty nesters,” single persons, and childless couples are growing segments of our society, with needs that have been largely underserved in the current residential market. Limited choice in the current housing market does not necessarily indicate a lack of a market for housing alternatives.

Recommendation 6: The Department of Community Affairs should undertake a special project to assist local governments in addressing the planning and environmental problems posed by large vested residential plats. Timed restrictions on issuance of building permits are one way to balance growth with the capacity of public facilities and services. This should be complemented with longer term strategies, such as consolidation of parcels, access management along existing arterials, and a program to retrofit platted communities with attractive and accessible service centers or an urban core.

Florida’s platted communities exemplify the transportation problems posed by large single use land areas. Many of these large, residential plats force residents onto a poorly designed street system served by
a few constrained arterials for the journey to work in nearby cities. The built environment in these communities has literally mandated traffic congestion. Retrofitting areas like these will be a growing problem in Florida. Adding lane capacity and building new bridges and corridors will help address problems created by the poorly designed street system. But these solutions are not sufficient to solve the congestion problems of platted communities over the long term because they fail to address the related causes of congestion—a dramatic land use imbalance, automobile dependent development patterns, and the absence of a commercial core. Some platted communities also pose serious environmental and public health concerns, including the potential for groundwater contamination. A large portion of Port St. Lucie, for example, is currently served by septic and well systems. Local governments will need the support of the State and of Regional Planning Councils in developing a more strategic approach to managing platted communities.

Recommendation 7: State planning requirements should be amended to require local governments to address economic development considerations in determining future land use and transportation needs, within the context of existing plan elements. The Department of Community Affairs should provide methodological guidance to local governments on this issue.

Economic development should be viewed comprehensively in the context of overall community development and quality of life. Economic development professionals advise that a variety of factors play into business relocation decisions—including access to a high quality labor force, low operating costs, quality of life, proximity to major markets, and so on. Business location decisions within a metropolitan area emphasize issues such as commuting time, cost-of-living considerations, and quality of the public school system. Thus, access and location are key, but should be defined in much broader terms than availability of land or a major highway. In turn, transportation capacity and commuting times can be improved through a variety of land use and transportation strategies. A comprehensive approach to economic development will preserve and enhance qualities that make a community and region attractive to businesses. In turn, growth management is an essential tool in achieving sustainable economic growth.

Recommendation 8: Local governments should work closely with area real estate developers and lenders in removing barriers to achieving land use and transportation objectives and facilitating innovation. Phase II of this study will identify such barriers and alternative strategies for supporting private sector innovation.

A hostile lending market, overbuilding, and an economic recession have discouraged real estate developers from innovation. Land developers will be reluctant to provide alternative forms of development in the absence of community assistance, due to the tremendous risk they must assume and conservatism of the lending market. Many local governments have further exacerbated this problem with regulatory barriers to innovation, including lengthy and uncertain review processes. Local regulatory programs are typically designed to prevent the worst, and lack adequate incentives and guidance for the level of performance desired.

Recommendation 9: This study strongly supports the need for Regional Planning Councils to provide technical assistance to local governments on specialized professional planning needs. Now that the regional role in administrating the DRI review process is being phased out, RPCs should engage in dialogue with
member governments regarding how to strategically refocus their staff and resources to best assist local governments in meeting their planning needs.

Successful planning requires consistent, adequate funding for the time and expertise required. Resource constraints are causing problems with maintaining the continuity and quality of local planning and regulatory efforts. Local governments must expend a large amount of their planning resources on administrative and review functions, leaving little time or money for proactive planning or research efforts. One of the most influential contributions that RPCs could make to the success of local comprehensive planning is the provision of quality data, information, and specialized planning services. This is particularly important for small- and medium-sized localities that cannot afford specialized staff. Examples of services needed by local governments that could be provided by RPCs include GIS mapping, urban design, and assistance with developing regulatory approaches for growth management purposes.

Recommendation 10: Regional Planning Councils should develop and maintain complete land use and land cover data bases (including utilities, street systems, plats) and enhanced GIS capabilities to assist local governments in their land use planning efforts. Information currently collected and maintained by various local and regional agencies (including Water Management Districts) should be identified and updated. The State and member local governments should provide financial assistance to Regional Planning Councils toward this effort.

Land use data bases and GIS capabilities vary across regional planning councils. Although some local governments are pursuing geographic information systems for growth management purposes, economies of scale would be achieved by providing GIS mapping services to local governments on a regional level. Geographic information systems are opening up new possibilities in planning and are suggesting the need for greater consistency in information and classification systems. Placing such services at the regional level would conserve planning resources over the long term, while enhancing the quality and capacity of local planning programs.

Recommendation 11: A standardized land use classification system should be adopted by the Department of Community Affairs and required for use in preparation of local land use maps.

Local land use classification systems vary widely, making it difficult to evaluate consistency on a regional basis. A standardized land use classification system would simplify communication between planners and the public; offer opportunities for comparative studies; make it easier to determine consistency of planning efforts across jurisdictions; and allow for more systematic research into regional urbanization trends. Land use classifications could be based on Standard Industrial Classification codes, as is currently the practice in many Florida communities. Such a system would go far in facilitating local and regional geographic information systems, would be useful for economic development purposes, and would still retain flexibility needed for future land use planning. For example, land use classifications could still be aggregated into locally desired land use categories for future land use planning purposes. Existing land use maps, however, would document land uses according to the land use classification code for inclusion in a GIS data base.
Transportation Planning Practice

Recommendation 12: The Florida DOT should refine regional travel demand forecasting models and traffic impact study methods to measure the effect of alternative development patterns on the number, length, and type of trips.

Despite ISTEA’s emphasis on land use strategies that support mode shifts, urban form remains the missing link in the transportation planning process. A review of interactive models for land use and transportation conducted for 1000 Friends of Oregon indicated that regional travel demand forecasting in the U.S. is lacking in its ability to simulate how congestion and travel costs influence where people choose to work or locate a business and how urban design oriented to pedestrian, bicycles, and transit can influence individual travel decisions. Analysis of transportation impacts should be refined to reflect differences in traffic impacts of post World War II suburban development patterns from those of community-design-oriented to pedestrian, bicycles, and transit.

Recommendation 13: The transportation planning process should be revised to recognize the uncertainty inherent in transportation modeling, particularly in forecasting model inputs. Phase II of this study will explore possible alterations to the transportation planning process that better acknowledge forecasting limitations and incorporate uncertainty. Florida MPOs apply the FSUTMS models for describing the interaction between land use and transportation and determining the number of trips, origins and destinations of these trips, the mode used, and the path taken. FDOT should be applauded for its national leadership in making these models available to local governments and MPOs. Yet travel behavior is extremely complex and the combination of factors, described by mathematical relationships, explains only a portion of real world travel behavior. Assumptions built into the models are reasonable but imprecise characterizations of reality. Such limitations in the precision of transportation planning models, are compounded by the uncertainty of forecasting socio-economic and land use conditions 20 years into the future. The transportation planning process should explicitly recognize this uncertainty, deal with alternative scenarios, and maximize flexibility.

Recommendation 14: FDOT’s transportation planning guidelines should emphasize that decisions on whether to provide alternative modes of transportation should not be based exclusively on short term cost-effectiveness or evaluation of current demand, but should also be based upon long term public goals and objectives.

A shift from a predominantly automobile-oriented transportation system, to a multimodal system, will require public commitment to make the necessary investment up front. In the short run, it will always be cheaper to add highway capacity than to provide fixed guideway transit. But over the long run, the volume of ridership will increase and the incremental cost will reflect that of highways. Communities like Atlanta, Georgia, that have developed successful fixed guideway transit systems did so based upon a long range vision. It must be recognized that demand for such systems is not spontaneous, but must be fostered through concerted public strategies. Like land use forecasting, if transportation demand is predicted entirely based upon current trends then lack of choice in the current system will continue to mandate more of the same. This is not to suggest that fixed guideway is appropriate for every urban area. There will be
cases where fixed guideway does not make sense, even over the long term.

**Recommendation 15:** High priority should be placed on improving intermodal connectivity and multimodal access to ports and aviation facilities in the local and regional planning process and in State transportation investment decisions. Consideration should be given to appointing representatives of port and aviation authorities to the voting membership of their respective MPO to help improve intermodal coordination.

The State of Florida relies on ports and aviation to support tourism and other economic development goals, and to remain competitive in an increasingly global marketplace. ISTEA also calls for greater attention to intermodal planning as a means of enhancing and preserving the ability of America to compete in the world economy. This will become increasingly crucial as foreign markets are opened up for free trade. Ports will serve as gateways to other nations and must have the capacity to move freight efficiently to harness these opportunities. Ports are also capturing a growing share of the tourism market as cruiselines increase in popularity. Airports are assuming a pivotal role in the world economy due to major changes in how the world does business—including international sourcing, “just-in time” delivery processes that drastically cut production and delivery cycles, and growing demand for rapid air shipment. In Florida, aviation is also crucial for transporting the millions of tourists that visit the state each year. In turn, aviation technology is moving toward increasing the size of aircrafts, due to limited capacity for airports to absorb greater frequency of flights.

All of this points to an even greater burden in terms of the amount of surface transportation that airports and ports will generate in the future. An integrated system for collecting and distributing goods and people will be especially crucial to Florida’s future, considering major increases in population and tourism over the past few decades. The world has seen a changing emphasis in public policy as the politics of the Cold War have been replaced by an economic war. The state of Florida must retain its competitive edge to preserve the prosperity and quality of life for its citizenry. One barrier to this has been inadequate attention to intermodal planning and investment in landside access systems to serve ports and airports by some regions that house such facilities. A coordinated governmental strategy that supports economic development through strategic investment in ports and aviation will be increasingly essential in the changing world economy. This strategy must further recognize the need for sustainable economic development that manages pollution, conserves natural resources, and controls other negative externalities of production.

**Recommendation 16:** The Legislature should provide adequate funding to allow the Florida Department of Transportation to improve and maintain the Florida Interstate Highway System (FIHS), consistent with legislative intent that established the FIHS. FDOT should also place higher priority on programming improvements to the FIHS than for non-FIHS projects on the State Highway System.

The Florida Interstate Highway System (FIHS) is the statewide system of limited access and controlled access facilities that allow for high-speed and high-volume traffic movement within the state (Sec. 338.001 F.S.). This system was designated by FDOT and adopted by the legislature in an effort to preserve regional and statewide transportation mobility. The FIHS program involves development and
improvement of a system of highways with strict access controls. The Department of Transportation is charged with making the necessary system improvements and entering into formal agreements with local governments for coordinating land use planning and regulation with State access standards for controlled access facilities.

All segments are planned to be brought into compliance with system criteria and standards within a 20-year period. An important part of this is the new Secretary's Interstate policy, which calls for separated HOV and through lanes on segments of the Interstate. This deadline may, however, prove unworkable given a substantial shortfall in projected funds available to the FDOT to bring the system up to FIHS standards within 20 years. Thus, finding adequate funding to maintain and improve Florida's priority statewide system of highways will remain an ongoing challenge for FDOT and the legislature. Because the FIHS is the backbone of the State transportation system, and is vital to the movement of people and goods around the state, it should receive a high priority in the assignment of available funds to projects. Specifically, it should receive a higher priority than non-FIHS projects on the State Highway System.

**Coordinating Land Use and Transportation**

**Recommendation 17:** The Florida Department of Transportation should continue to address land development considerations in its intermodal and multimodal planning framework. This should address the need for land use planning and land development regulation that support alternative modes of transportation and connectivity between modes, and the need for guideway or transit plans to be complemented by land use plans that focus development around transit stations, rather than disperse it.

Multimodal and intermodal planning initiatives must be combined with land development programs that guide the density, mix, and proximity of land uses. The success of alternative modes of transportation and connectivity between those modes depends upon a built environment that supports alternative modes of access, including pedestrian access. Specifically, guideway or transit plans need to be complemented by land use plans that focus development, rather than disperse it. Transit oriented developments (TODs) are one alternative.

**Recommendation 18:** MPOs, RPCs, local governments, and divisions of State agencies involved in addressing land use/transportation interactions should avoid single purpose (i.e., land use only, transportation only) planning programs and solutions and coordinate to build multidisciplinary teams of professionals to address land use and transportation problems. FDOT and DCA should initiate continuing working groups among their staffs to develop coordinated land use and transportation approaches.

Public policy considerations have become increasingly complex, requiring multidisciplinary solutions. Organizational separation between land use and transportation planning functions has reduced the capacity of planners to coordinate on these issues. Lack of a multidisciplinary view has promoted competition rather than collaboration between disciplines, to the detriment of public policy. Transportation planners, engineers, urban designers, and land use planners must work cooperatively if congestion management and mobility objectives are to be realized. Planning, design, and economic development professionals should be encouraged to
coordinate across disciplines and bring their unique expertise to bear on defining equitable solutions to transportation and land development issues.

**Recommendation 19:** Local governments should coordinate with the Florida Department of Transportation and their MPO to preserve designated future rights-of-way and this effort should be supported by the legislature.

Legal threats to corridor preservation have hampered efforts to improve coordination between land use and transportation systems. The Florida DOT is currently evaluating corridor preservation strategies and preparing a model corridor preservation ordinance aimed at balancing the public and private interest in these matters. The importance of this to a cost-effective transportation system cannot be overstated.

**Recommendation 20:** The Department of Community Affairs should place high priority on preserving the level of service on the Florida Interstate Highway System in its rules related to transportation concurrency exception areas.

Although the legislature encourages flexible approaches to transportation concurrency within urbanized areas, the preservation of statewide mobility demands that level of service on the FIHS be maintained. The FIHS plays a vital role in the commerce of the state. This important role should be protected, even in the case of transportation concurrency exception areas.

In the case of the Interstate system, emphasis should be placed upon maintaining LOS standards on the future lanes reserved for HOV and long distance trips.

**Recommendation 21:** Local governments should manage access to land development along major thoroughfares and coordinate with FDOT on managing access to the state highway system, especially those highways designated as part of the Florida Intrastate Highway System. FDOT should undertake a series of statewide seminars to encourage access management at the local level and provide regulatory guidance on this issue.

The tenets of access and location that guide business location decisions, result in development pressures along major thoroughfares and near highway interchanges. Yet land development regulations have not adequately addressed the need for well designed access systems on such corridors. Access management is essential to protect the safety and mobility of the travelling public, while preserving opportunities for commerce. The Center for Urban Transportation Research is collaborating with the Florida Department of Transportation to develop model land development and subdivision regulations that support access management. MPO and FDOT district staff should provide technical assistance to local governments in adapting these model standards for local use and encourage regional coordination on this effort.

**Recommendation 22:** The legislature should support FDOT in its effort to carry out the requirements of the State Highway System Access Management Act and amend Chapter 177 relating to the subdivision of land, to require local governments to include FDOT in review of subdivision activity on the State Highway System.

The 1992 legislative session amended the State Highway System Access Management Act in a manner that weakened the authority of the Florida Department of Transportation to manage access to the state highway system. This, combined with frequent litigation over access management issues, threatens to impede access management efforts. It is essential for the legislature to show strong support.
for access management and avoid amendments that weaken state or local authority in this matter. In turn, Chapter 177 should be amended to provide for FDOT review of proposed plats that would require access to the State Highway System. This would provide district transportation officials with an opportunity to catch access problems early in the plat review process and participate on design solutions. This has been used successfully in other states and would assist local governments, especially those with limited administrative capacity, in their subdivision review efforts.

Recommendation 23: FDOT districts should work with local governments to establish limits and alternatives to commercial stripping of major arterials. This could be achieved through intergovernmental agreements. FDOT and DCA should prepare and distribute an advisory circular to all local governments on this issue.

Local governments within a region often designate miles of thoroughfare frontage for strip commercial development. Reasons for this are accessibility and the expedience of rezoning highway frontage for commercial use, compared to planning and providing local access roads off the arterial or highway. Yet the practice of unrestrained commercial stripping has interfered with regional commuting and the efficient movement of goods and freight. In fact, many businesses that locate on such corridors do not rely on pass-by traffic for customers and thus do not require thoroughfare frontage. They would prosper in locations near thoroughfares if they were provided local access systems and land. Local governments should provide a system of local roads to complement thoroughfare access and encourage development of commercial centers, rather than commercial strips. In turn, these centers should be accessible to the adjoining land area rather than walled off, as is the case with commercial strips.

Recommendation 24: The Florida Department of Transportation District offices and respective Metropolitan Planning Organization should coordinate with local governments on managing the impacts of new interchanges. Land development and access management plans should be prepared for interchange areas, with financial or staff assistance from the Florida DOT and/or area MPO. Preparation of access management plans should be required in the FDOT Transportation Procedure for Approval of New or Modified Access to Limited Access Facilities.

New highway interchanges can have substantial impacts on land development patterns around the functional area of the interchange. In turn, if land development is not properly managed it can create safety hazards and interfere with the flow of traffic onto and off of the interchange. An access management plan would identify the appropriate access system around the interchange area in accordance with desired land development patterns. Such a plan would protect the function of the interchange and roadway network, while providing access to land development and preserving economic development opportunities of land around the highway interchange. Financial or staff assistance should be provided by the FDOT and MPO staff to assist local governments with managing the impacts of new highway interchanges.

Recommendation 25: Local governments should foster multimodal access to goods and services within neighborhoods and major activity centers.

Urban design and regulatory/site planning innovations, including performance zoning, neotraditional town planning, and transit oriented development, have
offered creative solutions to fostering multimodal access and compact urban form. Communities should be encouraged to look to these and other strategies to establish better linkages between residential areas and commercial service centers. These issues are discussed in more detail in a separate State Transportation Policy Initiative report on community design and transportation prepared by the Florida Center for Community Design and Research at the University of South Florida.

**Recommendation 26:** Priority should be given to maximizing the potential of the current system of major thoroughfares before adding new lane miles.

The policy intent of ISTE A is to make the most out of the existing highway network, before adding any new lane miles, and to provide greater modal choice in the transportation system. The new FDOT Intrastate Highway policy is already moving in this direction. ISTE A identified a variety of strategies to improve operation of the existing highway system, including transportation demand management, transportation systems management, land use and activity center strategies, incident management, intelligent vehicle highway systems, access management, and others. MPOs must give adequate priority to these alternatives in preparation of the TIP.

**Recommendation 27:** The Florida Department of Transportation and Department of Community Affairs should require local governments to prepare and coordinate on the preparation of corridor plans and regulatory programs to guide land development along new and existing corridors. This should be required in the FDOT State Transportation Corridor Designation and Protection and Monitoring Directive and FDOT should provide financial assistance toward preparation of such plans.

The Regional Planning Council or Conflict Resolution Consortium should manage disputes that arise between local governments in relation to corridor management plans.

Major corridors change the land development patterns of communities in their path. True coordination between land use and transportation requires proactive planning to address these interactions between land use and the transportation system and prevent conflicts that could arise in relation to growth management and transportation objectives. The FDOT State Transportation Corridor Designation and Protection and Monitoring Directive currently addresses coordination with local governments regarding potential regulatory action to preserve corridor rights-of-way and the need to manage future access to those corridors. Yet regulation is not enough. Local governments should also be required to coordinate on preparation of corridor land development plans to guide future growth along major corridors. This will preserve the functional integrity of these corridors over the long term, while protecting community character, encouraging sustainable economic development, and protecting natural resources.

**Recommendation 28:** MPOs should coordinate systems for monitoring concurrency among member local governments within the region. MPOs should also be required to coordinate concurrency monitoring efforts with each other in metropolitan regions comprised of more than one MPO.

Greater consistency is needed in the technical method of monitoring concurrency within regions that share a transportation network. A regional approach to monitoring transportation concurrency would provide local governments with the ability to monitor the implications of development activity
outside of their jurisdiction on local level of service. This may more effectively reflect the relationship between regional development trends and the movement of traffic, and the benefits of transportation demand management and transit on local and regional level of service. One vehicle for achieving this could be the congestion management systems required by ISTEA.

**Recommendation 29:** Local governments should use methods to monitor transportation level of service that are performance based and emphasize moving people and goods, not vehicles. The ELMS-III amendments included a variety of provisions to encourage this by increasing the flexibility of transportation concurrency management systems.

Over-reliance upon supplying additional capacity as a solution to congestion has contributed to leapfrog development by constraining urban infill and posing the threat of development moratoria where increasing capacity is impractical or financially prohibitive. Methods of measuring and applying level of service standards should direct decision makers beyond providing incremental capacity improvements. New methods are needed that consider the transportation system as a whole to find comprehensive, long term solutions that enhance capacity, encourage modal alternatives, and provide incentives to managing transportation demand. Some local governments are already pursuing this. Miami, for example, evaluates volume to capacity on its corridors based on the person-trip capacity, rather than the vehicle trip capacity. These alternatives are discussed in more detail in a separate State Transportation Policy Initiative study of level of service standards prepared by the Center for Urban Transportation Research.

**Recommendation 30:** Public mass transit facilities should not be subject to roadway concurrency. Statutory language pertaining to transportation concurrency should clearly exempt public mass transit facilities from roadway concurrency requirements. This would include Chapter 163.3180(5), F.S. pertaining to transportation concurrency exception areas.

In reviewing transportation concurrency, local governments evaluate mass transit facilities, such as commuter rail stations or transit terminals, as traffic generators. The overlooked fact is that public mass transit facilities are as much a part of the urban transportation system as are interchanges of limited access highways. The development of a new interchange redistributes traffic on connecting streets in much the same way that traffic is redistributed by development of a new rail station. Yet rail stations are evaluated for roadway concurrency, while highway interchanges are not. Rail stations do not generate new trips; they redistribute existing trips. Their net effect is an overall reduction in vehicle miles travelled. Given that both transit and highways provide transportation service, why is transit treated as a cause of congestion, rather than a solution?

Part of the problem is that transportation concurrency, as it is statutorily defined, addresses transportation facilities in terms of roadways and defines transportation concurrency in terms of highway level of service. Even transportation concurrency exceptions for urban infill and redevelopment projects, provided by the new ELMS-III legislation, pertain only to roadway concurrency exceptions. Clearly, roadway concurrency should not be applied to other transportation facilities. This conclusion is consistent with the original intent of transportation concurrency, to ensure that transportation facilities are available to address the impacts of land development. Roadway concurrency evaluation should be revised to recognize that public mass transit facilities are part of the roadway traffic.
congestion solution, not part of the problem.

Under the current statutory language and draft rules, public mass transit facilities are only exempted from meeting roadway concurrency where the local government exercises its option to establish a transportation concurrency exception area, and then only where specifically provided for by that local government. Local governments must also gain a determination of compliance from the Department of Community Affairs. Statutory language pertaining to concurrency in Chapter 163.3180, F.S. should be amended to exempt all public mass transit facilities from meeting roadway concurrency requirements—not just in exception areas, but as a general rule. In turn, the term “public mass transit facilities” should be defined under Chapter 163.3164(28), F.S., which contains the present definition for “projects that promote public transportation.”

**Recommendation 31**: Chapter 163.3180(5)(b), F.S. should be amended to include transit-oriented development areas as an exception under the local government roadway transportation concurrency exception area option.

Chapter 163.3180(5)(b), F.S. currently provides transportation concurrency exceptions for urban infill development, urban redevelopment, and downtown revitalization. A fourth exception should be added to this list allowing for transit-oriented development areas located within a defined radius surrounding rail stations or any other permanent transit station directly serving passengers. This new exception would be consistent with the intent for urban infill, urban redevelopment and downtown revitalization, in that all apply to some defined geographic area, rather than to a specific development project. The transit oriented development option could then be established by local governments according to criteria defined in 9J-5 F.A.C. These criteria should require local governments to define the geographic boundaries for the exception area as well as list pedestrian-friendly site design features for use in evaluating the proposed development. These may include: a) distance from the development entrance to the permanent transit station; b) provision of feeder transit stops and shelters with seating and other amenities; c) provision of walkways that are lighted and provide direct access.

**Recommendation 32**: Local governments should reevaluate their land development regulations for compatibility with the goals, objectives, and policies of their comprehensive plan.

Land development regulations and administrative processes often fail to provide what communities are trying to achieve from a policy perspective. Phase II of the State Transportation Policy Initiative will evaluate current regulatory practice in relation to future land use plans and policy and provide local governments with guidelines and recommendations for strengthening the linkage between planning policy and regulatory practice.

**Intergovernmental Coordination**

**Recommendation 33**: The boundaries of FDOT Districts, Regional Planning Councils, and Metropolitan Planning Organizations should be reevaluated to coordinate service areas and reduce fragmentation. The legislature’s Advisory Council on Intergovernmental Relations would be a logical organization to perform such an evaluation for the legislature’s consideration.
the current problem of overlapping agency boundaries. For example, single MPOs should not be split between separate Regional Planning Councils, as is currently the case with the Sarasota-Manatee MPO. This is especially important given changes to the RPC role in transportation planning under the ELMS-III legislation. FDOT district boundaries could also be revised to better encompass interdependent service areas. For example, Dade, Broward, and Palm Beach Counties function as an interdependent transportation system and are a single air quality nonattainment area, but are split between two FDOT Districts.

**Recommendation 34:** MPO boundaries should be based on considerations other than county jurisdictional boundaries, such as journey to work and other factors indicating regional interdependence of the transportation network. This study supports the recommendation of the ACIR that strong consideration should be given to merging MPOs that lie within the same metropolitan region and expanding existing MPOs, rather than creating new MPOs, as metropolitan areas expand.

ISTEA transferred authority for prioritizing many transportation investments in large metropolitan areas from the state DOT to the MPO. The challenge for MPOs will be to establish regional transportation policy, set priorities, and make hard funding decisions in a highly charged political climate. Although home rule political representation is essential in a democratic process, political fragmentation can magnify barriers to achieving regional consensus on transportation mobility issues. A regional forum could help reduce the potential for counterproductive competition by pushing members to address their concerns and coordinate improvement needs within the context of a regional, interdependent transportation system. Multiple, contiguous MPOs also result in some redundancy in planning efforts, whereas a combined MPO would create economies of scale in the regional transportation planning and modelling effort. By consolidating MPOs across a region, limited planning resources could be focused on increasing staff size and developing an effective, high quality planning program for the entire region.

Another alternative is the establishment of an umbrella regional MPO or coordinating council, as was pursued in the Tampa Bay area. This would retain home rule representation, while providing a forum for addressing issues of regional concern. Although this alternative appears to provide the best of both worlds, the underlying premise is essentially contradictory with the designated role of the MPO. MPOs are responsible for regional transportation planning, whereas local planning staff and elected officials are responsible for addressing transportation issues of local concern and for representing these local concerns in regional forums. It appears that the line between these two functions has been blurred, to the potential detriment of regional coordination. MPOs that lie in the same metropolitan area have been given two years to demonstrate their ability to adequately coordinate their efforts to address regional transportation needs and to meet the planning challenges and funding opportunities of ISTEA. At the end of two years, if renewed coordination efforts among MPOs have not been successful, then the current organization of MPOs should be reconsidered.

**Recommendation 35:** MPOs should take the lead in developing a formal approach for forging consensus toward a regional transportation and land use vision. Metropolitan regions comprised of more than one MPO should cooperate on the visioning effort.
Land use policy and development decisions are made by local government. Transportation decisions emphasize regional movement of traffic and are guided by a state and regional perspective. These two perspectives often conflict, due to the lack of a coordinated, long term approach to planning. Adding to the present difficulty of coordinating land use and transportation is the absence of local or regional consensus on how to grow. A strong vision for the future development of a community and region would help to reconcile land use and transportation trade-offs, address the long term mobility needs of the community, and facilitate growth management goals.

With the majority of plans in compliance, communities and MPOs now have the framework for establishing a regional transportation vision. The regional challenge will be achieving harmony among conflicting visions. Nonetheless, such a vision will be essential to harnessing the potential of federal funding under ISTEA. Each region will have to develop an approach to suit their needs. The regional “transportation roundtable” approach used in the Orlando/Orange County metropolitan area, described earlier in this report, is one possibility. Another approach was that used in the Palm Beach County and Martin County Urban Form Study and related Planning Forum Conference. Although neither of these efforts were spearheaded by an MPO, this would be an appropriate role for MPOs in the changing transportation policy framework under ISTEA.

Recommendation 36: Formal agreements between RPCs and MPOs should be mandatory in setting regional land development and transportation policy.

Both ISTEA and the ELMS-III amendments call for stronger regional coordination of land use and transportation planning. The ELMS legislation has charged RPCs with coordinating land development and transportation policies in a manner that fosters regionwide transportation systems and reviewing plans of independent transportation authorities and MPOs to identify inconsistencies. Because MPOs are responsible for regional transportation planning, it is essential that RPCs coordinate closely with MPOs in this effort.

Recommendation 37: The Governor should appoint ex-officio representatives of each Metropolitan Planning Organization to the membership of their respective Regional Planning Council.

The ELMS-III amendments expanded the membership of RPCs to improve coordination between land use, environmental issues, economic development, and transportation planning on a regional level. The Governor was required to appoint ex-officio representatives from various state agencies, but appointment of an ex-officio representative of each MPO within the region was left optional. Because MPOs are responsible for carrying out regional transportation planning, it is recommended that an MPO representative be appointed to the respective Regional Planning Council. Planning under both ISTEA and the ELMS-III amendments will become more participatory. Regional planning councils and metropolitan planning organizations must be more effective in coordinating their efforts and building consensus among their member governments.

Recommendation 38: With the DRI process being phased out, local governments have been required to develop a process for managing multijurisdictional impacts of large scale development within their intergovernmental coordination element. They should further be required to evaluate development review requirements in their land development code for adequacy in addressing the
impacts of large scale development projects.

The DRI process resulted in more detailed data collection and analyses for large scale projects than would have otherwise been conducted. The replacement of this important function will depend upon high quality comprehensive planning and development review procedures. Development review requirements for large development projects should provide for review by the FDOT District where state highways are involved, the water management district, and other appropriate entities.

Recommendation 39: Local governments should be required to address the effect of development decisions along major thoroughfares on the level of service of neighboring jurisdictions that share that thoroughfare. This should be addressed within the intergovernmental coordination element of the local comprehensive plan.

Although transportation demand is often generated outside a jurisdiction due to regional growth or through traffic originating outside the region, transportation concurrency is not coordinated on a regional basis. The impacts of regional development trends upon traffic congestion on a particular link remain largely ignored. Several communities raised concerns that development permitting “across the border” along major thoroughfares was threatening to overload their capacity from a concurrency perspective. Local governments should be required to recognize and address the effect of their development decisions along major thoroughfares on neighboring communities from a concurrency perspective.

Recommendation 40: This study supports the recommendation of the ELMS-III Committee that the Department of Community Affairs should prepare a model post-disaster redevelopment plan with implementing ordinances. Chapter 163.3178, F.S. should be amended to clarify the responsibilities of jurisdictions located in the coastal zone for preparing post-disaster redevelopment plans and the DCA should also amend Rule 9J-5.012 to contain minimum criteria for post-disaster redevelopment plans.

Recommendation 41: Preparation of the growth management portion of the State Comprehensive Plan provides an opportunity for prioritizing goals, where necessary. It is recommended that the Strategic Growth and Development Plan clearly establish the priority of minimizing risk to public safety, the environment, and public investment over coastal economic development activity that increases such risks.

Several goals and policies in the State Comprehensive Plan call for the need to minimize impact on environmentally sensitive areas and promote safety by discouraging development in high-hazard areas. These goals are sometimes in conflict with the state goal promoting tourism for the economic growth of Florida, as a major part of Florida tourism consists of beach development. A majority of Floridians also live in coastal counties. Nonetheless, many such areas are at risk of damaging winds and flooding during severe or even moderate storms.

Yet coastal development continues with inadequate consideration of these risks and the public and private costs of providing for development in areas prone to frequent flooding or at high risk of erosion. Communities appear compelled to rebuild at any cost, even in areas where past development decisions were not consistent with current planning or growth management policy. Evacuation times for a hurricane of least intensity, for example, can exceed 26 hours in some
counties, yet local planning has not adequately addressed this problem. Coastal living continues to be subsidized by unrealistically priced homeowners insurance in addition to Federal Flood Insurance, although insurance companies are increasingly attempting to shift this burden onto homeowners. The true cost of disaster relief, however, is much greater and is paid for by society as a whole.

Recommendations 42: The Florida Department of Transportation, in cooperation with the Department of Community Affairs, should adopt an official network of hurricane evacuation routes of state significance.

Currently, hurricane evacuation plans are the responsibility of County Civil Defense Directors who are responsible for designating emergency evacuation routes in their county. It is important that evacuation routes of state significance be well maintained and protected against flooding or other obstacles to evacuation. Designation of an official evacuation network will allow these facilities to be properly protected.

Recommendations 43: The ELMS-III recommendation that Regional Planning Councils assume a stronger role in coordinating planning efforts and mediating disputes across local governments is strongly supported. MPOs should also adopt procedures for dispute resolution.

Effective dispute resolution techniques will be crucial not only to comprehensive planning, but also to effective regional transportation planning under ISTEA. With the greater emphasis on public participation in the transportation planning process, MPO staff must develop strong dispute resolution techniques for forging consensus on the difficult trade-offs they will face. If Florida communities are to realize the potential benefits of the new planning framework, they must reach a consensus on transportation and land use issues. The divisiveness of regional politics will remain a hurdle in coordinating land use and transportation under ISTEA and state growth management requirements.

Recommendations 44: Local governments should pursue formal mediation to address disputes over private property rights arising from planning and regulatory initiatives, as a less costly and often more effective alternative to litigation. This could be provided as an administrative remedy in the land development code.

The courts are a costly and often ineffective forum for weighing planning policy. As planning considerations become more complex, greater reliance should be placed upon mediation and negotiated development agreements as a method of finding common ground between private initiatives and public policy.

Recommendation 45: Planning agencies should establish strong public outreach programs to inform citizens, the private sector, and elected officials regarding strategic objectives, stimulate debate regarding the appropriate course of action to achieve these objectives, and generate political support for planning initiatives.

Problems with intergovernmental coordination of planning efforts occur primarily in the political arena. Neighborhood and environmental groups have become increasingly concerned about the effect of land development and transportation initiatives on community character, the environment, and overall quality of life. Such conflicts are magnified by concerns over property rights, lack of continuity in political leadership, and the fact that legislative and regulatory solutions have not been enough to address the broader
spectrum of land policy issues. Engaging citizen involvement in the planning process is essential to addressing citizen concerns over growth and building public support for planning. Communities should address the concerns of stakeholders and harness the leadership potential of citizens and civic leaders in the private and nonprofit sectors to improve the quality and continuity of the planning program.
Appendix I

A Summary of ELMS-III

Vision
Section 163.3167 of the Florida Statutes is amended to encourage local governments to develop a “vision” based on the future appearance and qualities of their community. Local governments are to review comprehensive plans, land development regulations, and the capital improvements programs after their vision has been created to ensure that they will lead the community toward its goals. Neighboring communities—especially those sharing natural, physical or economic resources—are encouraged to participate in creating a “greater-than-local” vision. The local vision must be consistent with the state vision, when adopted, and internally consistent with its local plan.

Although the ELMS-III Act did not include provisions for producing a state vision, the ELMS-III Committee recommended its preparation “to set forth the destination we want to reach by means of our planning and growth management programs.” The vision would provide an image of the state as it appears in 20 to 30 years. Acting as the preamble to the state comprehensive plan, it would serve as a foundation for Florida’s state planning programs. The recommended visioning process emphasizes public participation to create a vision that stems from the collective ideas of all Floridians.

State Comprehensive Plan
Growth management transcends local boundaries and responsibilities of individual units of government. Therefore, the Legislature called for a more integrated planning system that ensures intergovernmental coordination on issues posed by the state’s continued growth and development. The State Comprehensive Plan shall provide direction to all levels of government regarding the orderly social, economic, and physical growth of the state. Further guidance is also provided in coordinating state agency strategic plans. To determine progress toward attaining state goals, the State Comprehensive Plan shall be evaluated biennially by the Office of the Governor.

The Act strengthens the growth management portion of the State Comprehensive Plan by requiring it to establish clear, concise, direct goals, objectives, and policies related to land development, water resources, transportation and related topics. The plan should, where possible, draw upon the state land development plan, the Florida Transportation Plan, and the state water use plan. Its purpose is to provide clarity, direction and sufficient detail for growth management programs at all levels of government. The plan must be strategic, rather than comprehensive, and shall not include a land use map.

Among other items, the growth management portion of the State Comprehensive Plan shall:

- identify urban and metropolitan growth centers;
- identify areas of state and regional environmental significance and establish strategies to protect them;
- set forth and integrate state policy for growth related to land development, air quality, transportation and water resources;
• provide guidelines for where urban growth is appropriate and should be encouraged;

• provide guidelines for state transportation corridors, public transportation corridors, new interchanges on limited access facilities, and new airports;

• provide coordinated state planning of road, rail, and waterborne transportation facilities designed to take the needs of agriculture into consideration and to provide for the transportation of agricultural products and suppliers;

• provide a statewide policy to enhance the multiuse waterfront development of existing deepwater ports, ensuring that priority is given to water-dependent land uses;

• recommend when and to what degree local plans must be consistent with the growth management portion of the State Comprehensive Plan;

• recommend how to integrate the state water plan, the state land development plans, and transportation plans required by Chapter 339, F.S., Transportation Finance and Planning; and

• set recommendations concerning what degree of consistency is appropriate for the strategic regional policy plans.

The Legislature directed the Executive Office of the Governor to prepare the growth management portion of the State Comprehensive Plan by October 15, 1993, for review by the Administration Commission. The Committee has concluded, however, that given the complexity and breadth of this legislative mandate, and the fact that the entire comprehensive plan was to be evaluated and rewritten, the time frame for preparing the growth management element was unrealistic and an extension was requested.

The growth management portion is to have legal effect upon adoption by the Legislature and the Legislature is to indicate which plans, activities, and permits must be consistent with the growth management portion of the State Comprehensive Plan. Biennial review of the growth management portion will be conducted by the Office of the Governor in conjunction with the evaluation of the State Comprehensive Plan.

Areas of Critical State Concern
The Act promotes coordination between State, regional, and local agencies in guiding development within an Area of Critical State Concern. The Department of Community Affairs shall recommend actions local government and state and regional agencies must take to carry out principles for guiding development. Broader authority is also granted to all affected state agencies to adopt permitting standards and criteria that further the purpose of the designation. When designating an Area of Critical State Concern, the Administration Commission is directed to provide a clear statement of the purpose of the designation and to develop a checklist of actions that will result in de-designation. Section 380.05, F.S. is amended to set forth guidelines in de-designating an Area of Critical State Concern.

Six months after designating an Area of Critical State Concern—and any time thereafter as directed by the Administration Commission—the Department of Environmental Protection, the Department of Health and Rehabilitative Services, the respective water management district, and other state agencies shall submit a report to evaluate the agency's Area of Critical State Concern program.
Regional Planning Councils

Although under review for sunsetting, RPCs were retained and recognized “as Florida’s only multipurpose regional entity that plans for and coordinates intergovernmental solutions to growth-related problems on greater-than-local issues.” The Act emphasizes the role of RPCs in regional planning and coordination, and not as a permitting or quasi-regulatory agency. Additional powers have been granted to RPCs, including:

- coordinating regional entities in developing the strategic regional policy plan;
- conducting a cross-acceptance negotiation process intended to resolve inconsistencies with regional and local plans;
- coordinating land development and transportation to foster regionwide transportation systems; and
- reviewing plans of transportation authorities and MPOs to identify inconsistencies between those agencies’ plans and local government plans.

Local governments may opt for regional mitigation on planning and growth management disputes. The Act directs the RPC to establish a dispute resolution process that provides for meetings among disputing parties, initiation of voluntary mediation, and initiation of arbitration or administrative or judicial action where appropriate.

The current boundaries of the RPCs were established in 1982, pursuant to the Florida Regional Planning Council Act. Due to Florida’s rapid population growth and lack of any previous systematic review, the Office of the Governor shall complete a review of regional planning council boundaries by January 1, 1994. The review will ensure that revised boundaries will comprise a workable system for effective regional planning.

Regional Policy Plan

Regional Planning Councils were directed to make the regional policy plan more strategic in nature. The Act renamed the regional policy plan as the “strategic regional policy plan” and specified which areas the plan will address. The plan shall contain regional goals and policies that address affordable housing, economic development, emergency preparedness, natural resources of regional significance, regional transportation, and any other subject relating to the particular needs of a district.

The strategic regional policy plan shall be consistent with the State Comprehensive Plan and the RPC must submit an EAR on its strategic regional policy plan every five years based on a schedule set by the Governor’s office and coordinated with local EARs. The Act states that the standards included in strategic regional policy plans may be used for planning purposes only and not for permitting or regulatory purposes.

To eliminate conflicts between State and regional agencies, an RPC may not adopt a planning standard that differs materially from a planning standard adopted by rule by state or regional agency, when such rule expressly states the planning standard is intended to preempt action by the RPC. Concurrency requirements prohibit an RPC from establishing binding level-of-service standards for public facilities and services provided or regulated by local governments. Also, any inconsistency between a local plan or amendment and the strategic policy plan cannot be the sole basis for finding the plan or amendment not in compliance.

Intergovernmental Coordination

The intergovernmental coordination element was expanded and strengthened.
to promote increased cooperation among governmental agencies and address development issues previously covered by the development of regional impact (DRI) program. Currently, many comprehensive plans lack effective guidelines for coordinating public decision making and reviewing impacts of development projects.

The element would be required to include:

- a process to determine and mitigate extrajurisdictional impacts of development with an option for regional mitigation;
- a process for modification of outstanding DRI development orders;
- development dispute resolution process; procedures to identify joint planning areas; and
- guidelines for recognition of campus master plans.

An improved intergovernmental element, consistent with the ELMS changes, is a prerequisite to terminating the DRI program. Local government’s must implement the amendments necessary to strengthen the element by December 31, 1997. Local governments who exercise their option to retain the DRI program are not required to expand their intergovernmental coordination element, but must address the new intergovernmental coordination requirements in their Evaluation and Appraisal Report.

New requirements also provided for the formation of interlocal agreements between a county, municipalities within that county, the district school board, and service providers to promote joint processes for collaborative planning and decision making. Among other things, activities involving cooperation may include location and extension of public facilities subject to concurrency, and siting facilities with countywide significance.

Developments of Regional Impact

The DRI program will be phased out in jurisdictions that have adopted an expanded intergovernmental coordination element and land development regulations that implement the expanded element, and have comprehensive plans in compliance. Counties with fewer than 100,000 residents, municipalities within those counties, and municipalities of fewer than 2,500 residents in counties in excess of 100,000 residents, shall have the option of continuing to participate in the DRI program through resolution or ordinance.

When the population exceeds the requirements to retain the DRI program or if the governing body revokes the option, the local government shall terminate the DRI program. If a development lies within a jurisdiction that retains the DRI program and a jurisdiction that has terminated the program, it shall undergo DRI review. Previously approved DRI orders shall continue to be effective, and may be enforced or abandoned. Projects that would have undergone DRI review but for termination are subject to appeal and enforcement by the Department of Community Affairs.

In the meantime and for all jurisdictions that retain the DRI program, review requirements have been substantially revised. As of December 1, 1993, rules will be adopted to implement new DRI thresholds within urban central business districts and regional activity centers. DRI thresholds will be amended as follows:

- a 50 percent increase for residential, hotel, motel, office, and retail developments;
- a 100 percent increase for multiuse developments, provided one land use is residential and amounts to not less
than 35 percent of the jurisdiction's applicable residential threshold; and

a 150 percent increase for resort or convention hotel developments, provided the increase is specifically for a proposed resort or convention hotel located in a county with a population greater than 500,000 and the local government specifically designates that the proposed resort or convention hotel development will serve an existing convention center built prior to July 1, 1992, that comprises more than 250,000 gross square feet.

Procedures for processing DRI applications that require plan amendments have been streamlined. Comprehensive plan amendments related to a development of regional impact can now be initiated by the developer. The local government must hear both the DRI application and the comprehensive plan amendment at the same public hearing. Thereafter, the appeal process for the local development orders and the compliance process for plan amendments remain unchanged. The developer may request expedited DRI review if the proposed DRI is certified by the local government to the Department of Community Affairs as consistent with the local comprehensive plan.

The abbreviated review process includes:

- a short application form to be promulgated by DCA by rule;
- a limitation on sufficiency of information requests—the RPC may request additional information no more than twice, unless the developer waives this limitation; and
- a limitation on the time for setting the local public hearing of no later than 90 days after the RPC issues

notice that a public hearing may be set, unless waived by the developer.

The Act revises RPC review of the regional impact of a DRI application. The list of specific issues for regional review was eliminated, with the exception of the effect of the project on the ability of people to find adequate housing reasonably accessible to their place of employment. RPCs are now directed to address the impact of the project on state or regional resources or facilities identified in applicable state or regional plans, and whether the project will significantly impact adjacent jurisdictions. At the request of an adjacent local government, the RPC may review and comment upon issues of concern to that government. RPCs may no longer appeal a local government's decision to approve or deny proposed changes to a previously approved DRI, nor can they promulgate rules to guide the DRI review process. Instead, they shall be subject to rules adopted by DCA. RPCs may request that DCA adopt different standards for a specific comprehensive planning district upon finding the statewide standard is inadequate to protect or promote the regional interest. If a regional standard is adopted, it will apply to all pertinent DRI reviews conducted in that region until rescinded. By January 1, 1994, DCA will adopt rules which establish uniform standards for DRI review. If a developer proposes to abandon and has not or will not develop the site after abandonment, then the owner or developer shall not be required to contribute any land, funds, or public facilities as a condition of abandonment.

Concurrency
The Act specifies which facilities and services shall be subject to concurrency requirements on a statewide basis. These include roads, sewer, solid waste, drain-
age, potable water, parks and recreational facilities, and mass transit, where applicable. However, local governments now have the option to extend concurrency requirements to include other forms of infrastructure as the growth management system matures.

The Act established that new facilities must be in place no later than the issuance of a certificate of occupancy, with certain exceptions for transportation and parks. Parks and recreation facilities to serve new developments shall be in place no later than one year after the issuance of a certificate of occupancy. However, prior to the issuance of a certificate of occupancy, land must be dedicated or acquired by the local government or the developer’s fair share funds must be committed. State and other public facilities and development will also be subject to concurrency. Concerns have arisen regarding which governmental agency shall establish level-of-service standards when multiple public agencies are involved. The new Act specifically states that only governmental entities responsible for providing, financing, operating or regulating facilities shall establish binding level-of-service standards for public facilities.

**Transportation Concurrency**

The Act requires that transportation facilities are required to be in place to serve development three years after issuance of a certificate of occupancy. However, realizing that transportation concurrency may interfere with other goals of local comprehensive plans, the Legislature permitted local governments to grant certain exceptions from concurrency requirements. Such exceptions may be issued for projects that promote public transportation, or within an area which the comprehensive plan designates for urban infill development, urban redevelopment, or downtown revitalization. Also, any facility within the preceding exception areas or in an urban service area that creates “special part-time demands” on transportation infrastructure, such as stadiums or arenas, may also be excluded from concurrency requirements.

Local governments can adopt a long-term transportation concurrency management system with a planning period of up to 10 years for significantly backlogged districts. These must be adopted as part of the comprehensive plan. The local plan can adopt interim level-of-service standards on certain facilities and may rely on the schedule of capital improvements as a basis for issuing development permits. The Act allows extension of the long term concurrency management system to 15 years depending upon:

- the extent of the backlog;
- whether the backlog is on local or state roads;
- the cost of eliminating the backlog; and
- the local government’s tax and other revenue-raising efforts.

Under certain situations, a developer may proceed with development if transportation concurrency requirements are not met. Conditions for the “pay and go” option include: development is consistent with future land use designation; local plan includes a capital improvements element that provides for transportation facilities adequate to serve the proposed development; local government has provided a fair share of the cost assessment to the landowner for transportation facilities; and the landowner has made a binding commitment to the local government to pay fair share of the cost of providing the transportation facilities to serve the development.

A _de minimis_ impact that will not cause significant degradation of the existing
level of service on transportation facilities was deemed consistent with concurrency requirements. Local governments are encouraged to allow de minimis impacts on transportation facilities for projects that do not degrade the adopted level of service standard more than 3% of the maximum volume.

The Act also gives the government with funding and maintenance responsibility over roads more control over concurrency service levels. Local government level-of-service standards for the Intrastate Highway System must be consistent with FDOT. However, local governments can establish their own level-of-service standards on all other roads on the State Highway System.

Transportation Concurrency Management Areas (TCMAs) were written into legislation as another flexible application of transportation concurrency, for the purpose of promoting urban infill and redevelopment. TCMAs are to be identified in the local comprehensive plan and may only be applied in a "compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips." Local governments may establish a separate areawide level of service standard within the TCMA based upon an analysis that justifies the LOS standard, how infill or redevelopment will be promoted, and how mobility will be accomplished within the TCMA. Chapter 9J-5, F.A.C. will be amended to carry out the ELMS changes.

Transportation Element of the Comprehensive Plan
A new transportation element must be adopted by local governments within Metropolitan Planning Organization boundaries. The new element will consolidate all aspects of transportation and include:

- traffic circulation, including major thoroughfares and other routes, including bicycle and pedestrian ways;
- all alternative modes of travel, such as public transportation, pedestrian, and bicycle travel;
- parking facilities;
- aviation, rail, seaport facilities and services to serve existing land uses;
- the availability of facilities and services to serve existing land uses and the compatibility between future land use and transportation elements;
- the capability to evacuate the coastal population prior to an impending natural disaster;
- airports, projected airport and aviation development, and land use compatibility around airports; and
- an identification of land use densities, building intensities, and transportation management programs to promote public transportation systems in designated public transportation corridors so as to encourage population densities sufficient to support such systems.

Review of Comprehensive Plan Amendments
Changes to the local plan amendment adoption and review process will allow local governments to amend their comprehensive plans in a more timely manner. Prior to ELMS, all proposed comprehensive plan amendments automatically underwent review by DCA, which collected responses from other state agencies. Review of amendments shall be completed by the DCA only if it is requested by the Regional Planning Council, an affected person, or the local government transmitting the plan amendment. However, DCA may still review any proposed plan amendment regardless
of whether a request for review has been made.

When review is requested, the Regional Planning Council’s review is limited to effects the amendment will have on regional resources or facilities in the strategic regional policy plan and extrajurisdictional impacts that would be inconsistent with the comprehensive plan of the affected local government. Inconsistency between a local plan amendment and a strategic regional policy plan may not be the sole basis for the RPC to find the amendment not in compliance.

**Evaluation and Appraisal Reports**

Evaluation and Appraisal Reports (EARs) have been required of local governments for the purpose of monitoring the effectiveness of the comprehensive plan in guiding the community toward its goals and objectives. The Act states that EARs shall be the principal process for updating local comprehensive plans to reflect changes in state policy on planning and growth management. In addition to other components, EARs must now include:

- the effect changes in state law have upon local government comprehensive plans;
- actions to be taken with respect to planning issues identified in the report; and
- proposed plan amendments necessary to carry out issues raised in the report.

Submission of the EAR to the Department of Community Affairs has been extended to no later than seven years after the adoption of the comprehensive plan, with periodic reports every five years thereafter. DCA’s review of the EAR will not include a “compliance” decision but shall be limited to timely submission and inclusion of the prescribed components. DCA will adopt rules for review of reports and may delegate review of the report to the respective Regional Planning Council.

When developing an EAR, a municipality with 5000 residents or less or a county with 50,000 residents or less, has the option to focus on selected issues or elements. Municipalities with 2500 residents or less, must submit an EAR no later than twelve years after the adoption of their comprehensive plan, with periodic reports every 10 years thereafter.

**Annexation and Enclaves**

Previously, an annexing municipality had to submit a separate vote when annexing any contiguous, compact unincorporated area. The new law states a vote by the annexing municipality is necessary if the total area annexed exceeds five percent of the total land area of the municipality. If the proposed annexed area contains no voters then the property owner consent is required to proceed with the annexation. Until a comprehensive plan amendment is adopted by the municipality, an annexed area is subject to county land use plan and county zoning or subdivision regulations.

The Act amends Chapter 171, Municipal Annexation or Contraction, to include a definition of “enclave” as any unincorporated area that is enclosed within or bounded by another municipality and/or a natural or manmade obstacle. Recognizing that enclaves can create significant problems in planning, growth management, and service delivery, the Legislature declared that it is the policy of the state to eliminate enclaves. The Act expedites the annexation of enclaves of 10 acres or less by allowing municipalities to annex by interlocal agreement with the county having jurisdiction of the enclave, or annex an enclave with fewer than 25 voters by municipal ordinance when the annexation is approved by at least 60 percent of the voters who reside in the
enclave. These provisions do not apply to undeveloped or unimproved real property.

**University Campus Master Plans**

It is legislative intent to provide special growth management provisions to recognize the unique relationship between campuses of the State University System and the local governments in which they are located. The Board of Regents has been directed to prepare and adopt a campus master plan for each campus of each institution over which it has jurisdiction by July 1, 1995. The campus master plan must contain elements relating to future land use, intergovernmental coordination, capital improvements, recreation and open space, general infrastructure, housing, and conservation. The transportation element must address reasonable transportation demand management techniques to minimize off-site impacts. The plan must not be in conflict with the comprehensive plan of the host or affected local government while remaining consistent with the State Comprehensive Plan. Campus master plans must be updated every five years.

The Administration Commission shall provide a dispute resolution process which will mediate between the Board of Regents and an affected party that challenges the adopted plan. A petition filed by an affected local government is limited to issues pertaining to the public facilities or services they provide or to the direct impact the campus would have on their jurisdiction.

**State University System Concurrency Trust Fund**

The General Revenue service charge, a 7.3 percent deduction from revenues raised by any local option motor fuel tax, shall be deposited in the new State University System Concurrency Trust Fund. Monies in the Fund shall be used for funding State University System offsite improvements required to meet concurrency standards.

**Funding**

Effective May 1, 1993, an additional one to five cent local option gas tax may be levied upon every gallon of motor fuel sold in a county. Such a tax shall be adopted by a majority plus one vote of the governing body of the county or by referendum. The tax must be imposed by July 1 to be effective September of any year. Prior to imposition of the tax, the county may establish by interlocal agreement with the municipalities within the county, a formula for dividing up the entire proceeds of the tax. If no interlocal agreement is reached, the proceeds of the tax shall be distributed among the county and municipalities based on transportation expenditures of each for the preceding five fiscal years. Local governments must utilize the additional local option gas tax revenue for transportation expenditures needed to meet the capital improvements element of the adopted comprehensive plan.
NOTES

4 Information provided by the Senate Finance, Taxation, and Claims Committee, Tallahassee, Florida, August 1993.
5 *Florida's Fiscal Future, op cit.*, 35.
8 Memorandum from Florida Governor Lawton Chiles to Secretary of State Jim Smith, June 4, 1993.
12 *Federal Register* 58 (1) (January 4, 1993).
15 Staff of the Bureau of Economic and Business Research, personal interview, May 1993.
22 *Ibid.*, 1-4 - 1-5.

25 Ibid., 253.

26 Ibid., 167-8.


28 Ibid., pp. 73-97.


30 Ibid., 73-97.

31 Christopher Harris, "Bringing Land Use Ratios Into the '90s," *PAS Memo* (Chicago: American Planning Association, August 1992).


37 Ibid., 13.


40 Ibid., 15.


48 Port of Miami 1993 Port Directory.

49 Information on the Port of Tampa was obtained from the "Tampa Port Authority 1994 Official Directory," *Maddux Report* X(11) (December 1993), 53-92.


55 Florida Department of Transportation, Summary of Transportation Related Legislation (June 1993), 65.


57 S. Cohen, "Insurance After Andrew," Tampa Tribune, June 1, 1993.


60 Charlotte County/City of Punta Gorda Comprehensive Plan, Coastal Management Element, adopted December 16, 1988, 55.


63 Memorandum from Florida Governor Lawton Chiles to Hillsborough County MPO Chairman Ed Turanchik, July 2, 1993.


65 Building Successful Communities, op cit., 77.

REFERENCES


Dougherty, J. “Top Transportation Administrators Address Intermodalism.” Passenger Transport (November 2, 1992): 4-.


The Urban Form Study: A Vision for Palm Beach County. Background paper prepared by the North Palm Beach County/Southern Martin County Planning Forum and coordinated by the FAU/FIU, Joint Center for Environmental and Urban Problems and the FAU Institute of Government, August 1993.


**Plans and Related Documents**

**State**


**Regional**


Treasure Coast Regional Planning Council. "Jupiter Farms Case Study."

**Local**


City of Cape Coral Comprehensive Plan, October 1992 (selected elements).


Lee County Comprehensive Plan, as amended, January 1990.


City of Orlando Growth Management Plan, August 1991. (selected elements)


Osceola County Comprehensive Plan, April 1991.


Pinellas County Comprehensive Plan, as amended, October 1991.

City of Port St. Lucie Comprehensive Plan, June 1990.


St. Lucie Comprehensive Plan Update, January 1990.


Transportation Corridors: Meeting the Challenge of Growth Management in Miami, September 1990.

"Transportation and Growth Management: A Planning and Policy Agenda"

CUTR Project Team: Kristine Williams, AICP
Sara Hendricks, AICP
Stacey Bricka
Daniel Rudge
Irene Nikitopoulos