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ENVIRONMENTAL PLANNING IN FLORIDA

Florida's ETDM Process: Efficient Transportation Decision Making While Protecting the Environment

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Abstract: The Florida Department of Transportation has developed a completely new process for how the State of Florida plans transportation projects and accomplishes environmental review and consideration of sociocultural effects. The new process for transportation decision making was developed by FDOT working in conjunction with federal and state agencies to develop an entirely new process that efficiently meets statutory requirements and delivers projects which respect and protect Florida's resources.

The new process is called "Efficient Transportation Decision Making" or the ETDM Process. The objectives of the multi-agency working group that developed this process were outlined by Congress in Section 1309 of the Transportation Equity Act for the 21st Century (TEA-21):

- Provide early and continuous involvement of agencies and the public in the review process.
- Integrate environmental review and permitting processes.
- Establish coordinated time schedules for agency action.
- Establish effective dispute resolution mechanisms.
- Provide access to information through use of technology.

FDOT assembled 23 federal and state agencies at the initial "summit" in February 2000 to ask for their support and commitment to develop this process. Summit participants developed a "vision statement" for the new process. Their agencies then participated in a series of multi-agency meetings to identify the elements of a process that would improve efficiency (early involvement, easy access to good data, continuous agency and community involvement, teamwork, a method to screen projects early, and an effective method for handling disputes).

Early agency involvement is provided through two "screening" events, which occur early in project planning and before significant engineering work proceeds. These events are the "Planning Screen" and the "Programming Screen." Agency input received early in planning may identify the need for wildlife crossings, community-expressed concerns or other needs for reconfiguration of a project to avoid or minimize adverse effects. This early awareness improves the project cost estimates, which can affect project priorities.

Coordination is achieved through Environmental Technical Advisory Teams (ETATs) which are formed for each of the seven FDOT districts. ETAT members review project information and provide input about technical scopes of work required for project development. These focused scopes of work are expected to improve the quality of information considered and will allow the FDOT to address key issues of concern. All coordination is achieved using the Environmental Screening Tool (EST). This is an Internet-accessible interactive database system with GIS which allows ETAT members and the public to view project plans and the effects on resources. Stakeholder input is documented in the EST and visible to all parties involved in transportation decision making. The EST is described more fully in a companion paper.

A key provision in the ETDM Process is that disputed projects do not advance to the FDOT Work Program until dispute resolution has occurred. A methodology for resolving disputes is built into the new process and focuses problem resolution at the local level where consultation among ETAT members is expected to resolve most disputes prior to elevation within agencies.

Overview

Florida is changing the way it does business. The Florida Department of Transportation (FDOT) has completely revamped the procedures for planning transportation projects, conducting environmental reviews or consultation and developing, and permitting projects. These changes were initiated by the Section 1309 "Streamlining" provisions contained within the Transportation Equity Act for the 21st Century (TEA-21), which was passed in July 1999. Some of the key objectives contained within Section 1309 of TEA-21 included:

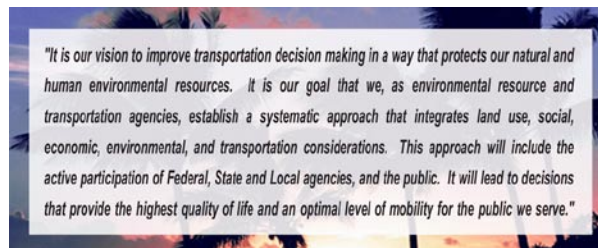
- Effective/timely decision making without compromising environmental quality
- Integrating review and permitting processes
- Early NEPA reviews and approvals
- Full and early participation
- Meaningful dispute resolution

These initiatives were in response to concerns expressed by citizens for years about the amount of time it takes to implement a transportation project. From the first years when a transportation need is identified until the project is delivered often takes 10 to 15 years or more. The time from “concept to concrete” is simply too long. Furthermore, departments of transportation, agencies, citizens and non-governmental organizations have seen the inefficiency in implementation of the National Environmental Policy Act environmental reviews when long time gaps occur between agency NEPA reviews and the environmental reviews conducted during project permitting. Often gaps of 5 to 10 years or more may occur, with significant changes occurring in the interim throughout the corridor initially reviewed.

The Central Environmental Management Office of the FDOT seized the initiative when Congress passed TEA-21 and decided to reexamine the department’s entire process from the very early stages of planning through project development and permitting. This paper describes the resulting process, Florida’s ETDM Process – Efficient Transportation Decision Making. Revamping the entire process required that a more efficient methodology be used to present project planning information and to gather input from agencies and the affected community. As part of the ETDM process, the FDOT has implemented a statewide Internet-accessible interactive database tool called the Environmental Screening Tool (EST). A companion paper provides a detailed description of the EST.

Getting Started

FDOT invited federal and state agency heads together in a “summit” in February 2000 to request their agency support in re-examining the entire transportation planning process. FDOT also requested that each agency designate one point of contact to participate in a multi-agency working group to redefine how projects would be planned, reviewed and subsequently permitted. During one of the initial multi-agency working group meetings, the group created a vision statement, which has guided each decision and action in creating this new process.



Several key phrases are worth noting, the first of which is “....protects our natural and human environmental resources.” The ETDM Process provides equal emphasis on the human environment and the natural environment, and the supporting Environmental Screening Tool delivers the data upon which balanced decisions may be made. A second phrase, “....integrates land use, social, economic, environmental and transportation considerations,” highlights the interaction between agencies and the public which allows balanced consideration of mobility, land use, ecosystem preservation and management, and the human environment. And lastly, the closing sentence includes a goal of providing “....the highest quality of life and an optimal level of mobility for the public we serve.” Simply stated the goal of the multi-agency working group was to do what is right for Florida.

Agency participants in essence were provided a blank sheet of paper. During the early working group meetings, FDOT made it very clear that the current procedures contained within their Project Development and Environment (PD&E) manual were completely on the table. The FDOT asked agency participants what they wanted in an entirely new process. Initial meetings involved a considerable amount of learning by all parties. The planners at the metropolitan planning organizations (MPOs) were not familiar with the FDOT’s PD&E process. Project development engineers were not familiar with the planning work done by MPOs, and permitting agencies were not familiar with the amount of work that was performed prior to project design and submittal of permit applications. At one point in these meetings, a 34-ft-long diagram of the FDOT’s PD&E process was posted on the wall for agencies to review. One permitting agency participant noted their agency became involved at the 29-ft point in the PD&E chart. That observation highlighted the need for earlier agency participation in the process. Agency participants requested the following key features in a new process:

- Early and continuous agency involvement
- Good data upon which to base decisions
- Feedback about how agency participation resulted in better transportation decisions.

In return for earlier and improved agency interaction in the planning and review processes, FDOT cited their interest in receiving earlier agency approvals. For most agencies, this translates to earlier issuance of agency permits.

The Problem

Figure 1 presents a simplified diagram of the transportation planning and environmental review process used prior to the ETDM Process.

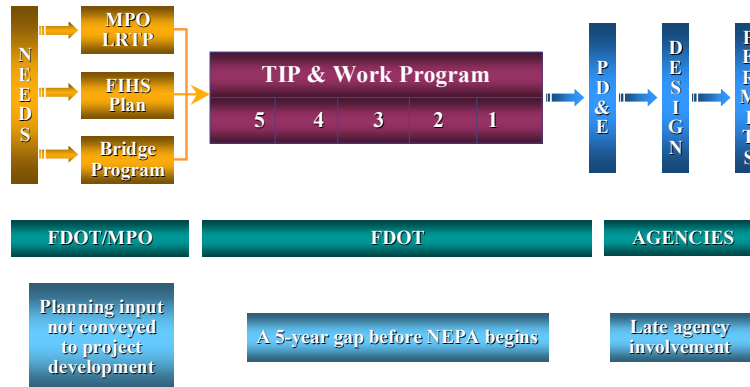


Fig. 1. Planning and review process pre-ETDM.

The transportation planning process begins when MPOs and FDOT identify mobility needs. Project needs are matched to available funding for projects, and ultimately a cost-feasible plan is adopted by the MPOs. This is referred to as the Long-Range Transportation Plan (LRTP). Similarly, FDOT develops a cost-feasible plan for the Florida Intrastate Highway System (FIHS) and for the Bridge Program. Priority projects are selected annually from these cost-feasible plans and are presented to the Legislature as the tentative Work Program. The Legislature then approves the Work Program. The Work Program is a five-year program. New projects enter the new fifth year of the Work Program and may await funding for up to five years before significant work proceeds. At that point, the PD&E process begins, design survey work is conducted and agency interaction begins. In the old PD&E process, this was the start of NEPA. The PD&E process is followed by the design phase.

Many of Florida's permitting agencies would traditionally await the submittal of a permit application before significant effort was expended in project review. This would typically occur at about the 60-percent level of detail in the design phase. The problems with this process are evident:

- The process involves a long sequence of actions.
- Long time gaps occur between some steps.
- Planning information may be obsolete before PD&E begins.
- Community concerns elicited during planning may not be effectively communicated to designers.
- Agency involvement occurs late in the process after substantial work is performed.
- Too much momentum has built for delivery of the project to allow significant change.

The Rose Bay Bridge project in Port Orange Florida exemplifies the problems that can occur with late agency involvement. Figure 2 is an aerial photograph of the Rose Bay Bridge.



Fig. 2. Rose Bay Bridge.

In its final configuration, a new bridge spans the entire waterway. Initially, this roadway crossed the waterway on a causeway with a short bridge near the center of the waterway. That short bridge was deemed operationally obsolete and scheduled for replacement. The replacement bridge was designed and permit applications submitted. The final permit for the replacement bridge were denied based on water quality

considerations, and ultimately a completely new bridge was designed (which opened the waterway to historical flow patterns). Late agency involvement in this case led to late agency permit denial, and FDOT had to completely redesign the bridge and reapply for permits. This is exactly the problem that Florida's ETDM Process should avoid in the future. Early agency involvement and identification of issues, and resolution of issues, will avoid lost effort and duplication of effort.

Early Agency Involvement

Working group participants identified “early agency involvement” as the key to success in a new process. After considerable discussion, it was decided that two opportunities would be provided to agencies to review projects prior to the start of significant engineering work. These opportunities are referred to as the “Planning Screen” and the “Programming Screen.” Figure 3 presents a schematic diagram of the occurrence of these two screening events in the project planning and delivery process.

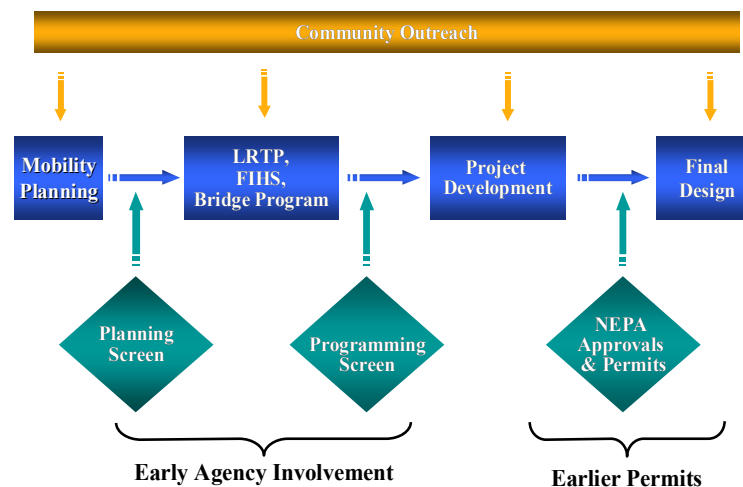


Fig. 3. Early involvement.

The “Planning Screen” is intended to occur in conjunction with development of cost-feasible plans. Project needs are reviewed by agencies who provide information to project planners about the effect that a planned project would have on resources protected or managed by that agency. In urban areas, MPOs would provide input about the effect of a project on the community. FDOT would provide input about community effects (now referred to as “sociocultural effects”) for projects on the FHHS and projects in non-MPO areas of the state. At this early stage of planning, the information provided by agencies would help identify project configurations that would avoid or minimize adverse effects on Florida’s natural or human environments. In the case of known unavoidable effects, agencies could provide commentary on suggested mitigation measures. This information would be used by project planners to alter project cost estimates, and in some cases the project priority might change based on cost feasibility due to adverse effects. Some projects might not advance due to adverse effects.

The “Programming Screen” occurs before projects are considered for the FDOT Work Program. Agency input during the Programming Screen is more detailed. The intent during this screen is that agencies provide specific information to identify technical issues that must be addressed by engineers and planners during the project development phase. Agency input during the “Programming Screen” comprises the NEPA scope of work – the technical work needed to satisfy that agency’s statutory responsibility. This input by the agencies will then be used by FDOT to develop a specific scope of work to be performed during project development.

In some cases, agencies will identify that a technical issue is not present. This will allow FDOT to reduce that item from the project development scope of work and to focus subsequent engineering and planning work on those key technical issues that really need to be addressed. There will not be a need to “prove the negative” (for example performing a biological assessment when the appropriate agency has already indicated it is not needed). Focused technical scopes are expected to produce cost reduction in Florida’s ETDM Process.

Agency and Public Interaction

Each of FDOT’s seven geographic districts will develop an “Environmental Technical Advisory Team” (ETAT) consisting of representatives from agencies which have statutory responsibility for issuing permits or

conducting consultation under NEPA. The district's ETAT will be responsible for interacting with the FDOT and with MPOs throughout the ETDM Process. Each district and each MPO has designated an "ETDM Coordinator" who has the responsibility for interacting with agency ETAT representatives and also for coordinating activities within the district. Districts and MPOs have also assigned "Community Liaison Coordinators" (CLCs) who have the responsibility for interaction with the affected community and for establishing the two-way conduit of communication about project plans.

All of this interaction with agency ETAT members and with the public during the planning screen provides guidance and recommendations during early phases of project planning. The ETAT identifies avoidance and minimization issues, the CLC works with the community to address community issues and community requests regarding context-sensitive design. During the "Programming Screen" more specific information is developed which affects the scope of work to be performed during project development. During project development coordination by ETAT members occurs to ensure that others within the agency understand the project concept and the basis of design. The intent is that there be "no late surprises" (late requests for another scope of work, permit condition changes, permit denials, community concerns or disapproval). The following activities would occur during the Planning Screen:

- ETAT
- Review purpose and need
- Review direct impacts
- Recommend avoidance/minimization
- Suggest mitigation strategies
- Provide secondary and cumulative effects commentary
- Assess degree of effect
- Coordinate to reduce conflicts
- Community outreach
- Inventory community characteristics
- Conduct public outreach
- Conduct public meetings on LRTP
- Document community concerns
- Identify sociocultural effects
- Make summary report available

It is important to note that secondary and cumulative effects would be evaluated on a system-wide basis during the Planning Screen.

During the Programming Screen, the above information items are again reviewed, although the depth of review would be more detailed. ETAT representatives identify the NEPA scope of work at this time. The amount of information that must flow between project planners, designers, ETAT and the public is enormous. The ETDM Process includes an elegant solution for providing information to people and also allows people to input their commentary specific to the project. This tool is called the "Environmental Screening Tool."

Environmental Screening Tool

The Environmental Screening Tool (EST) is an Internet-accessible interactive database and mapping application. The EST integrates resource and project data from multiple sources into one standard format and provides quick and standardized analyses of the effects of the proposed project on natural and human resources. The tool also supports communication between agencies, planners, engineers and the affected public. A companion paper, "Florida's Environmental Screening Tool: Laying the Technology Foundations for Efficient Transportation Decision Making," describes the EST in more detail.

Figure 4 presents a schematic diagram which depicts the essence of the information available through use of the Environmental Screening Tool. Four "interactions" are illustrated:

- Data entry
- GIS analyses
- Project review
- Summary report

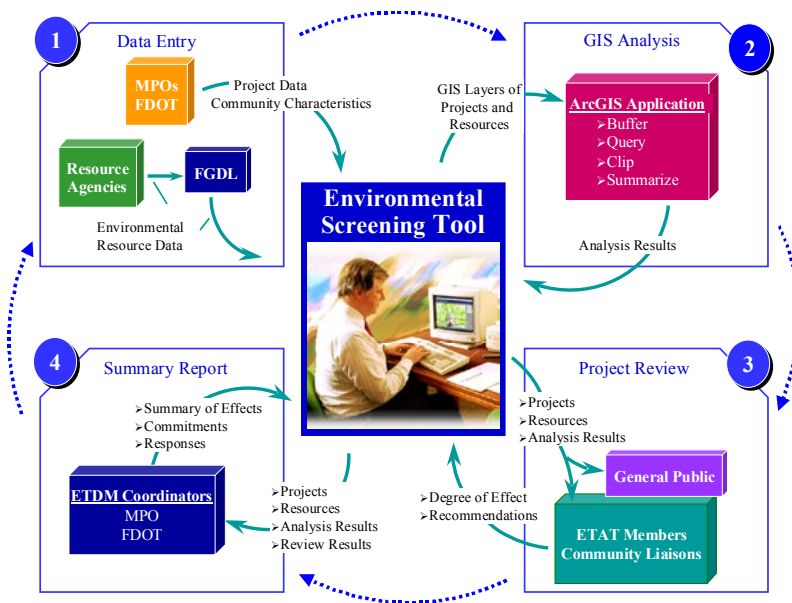


Fig. 4. Environmental screening tool

The operation of the tool is described fully in the companion paper. The following comments highlight some features of the EST.

Agency Data Responsibility

Florida is very fortunate to have a wealth of available digital data which describes the state’s resources. Most agencies have provided their data to the Florida Geographic Data Library (FGDL) which is housed at the GeoPlan Center at the University of Florida. One of the responsibilities of agency ETAT representatives is to ensure that their agency data are current in the FGDL. During early multi-agency meetings “good data” was identified as key to achieving successful early agency involvement. Project planners are responsible for data entry regarding project plans. ETAT members are responsible for seeing that the best available data are in the FGDL. ETAT members are also responsible for understanding data limitations. Some data gaps may occur. Some data may be inaccurate or incomplete. ETAT members are responsible for understanding their data, performing reconnaissance to verify data and recommending a technical study to accumulate appropriate data for the FGDL, if warranted.

Standardized GIS Analyses

Standardized analyses are performed once project data are entered into the EST. Agency representatives selected the data sets to be analyzed and prescribed analyses to be performed. Agency representatives worked with ETDM team members to identify graphic and tabular outputs needed to fulfill statutory responsibilities. It is expected that as users become accustomed to the EST, additional data or additional analyses may be requested. The EST has been developed with flexibility to allow further enhancements in the future in response to user needs.

ETAT and Public Reviews

ETAT members are provided username and password access to the EST. At the completion of each screen (Planning Screen and Programming Screen) the ETAT representative enters the agency position and applies the username and password to the ETAT input as the “electronic signature” for the agency. ETAT members consequently need to coordinate within their agency to obtain appropriate approvals before ETAT inputs the agency position and applies the “electronic signature.”

The public is provided access to standard maps and is able to view all posted ETAT comments. The public is not able, however, to directly input information into the EST. Traditional methods must continue to be used in order to influence the process. Attendance at MPO and FDOT meetings and workshops and written comments during workshops and hearings will continue to be recorded by MPOs or by the FDOT. The district’s community liaison coordinator is responsible for digesting those individual comments into a succinct entry to the EST, and that information will be visible to the public just as ETAT input is visible.

Project Degrees of Effect

ETAT members and the community liaison coordinator are responsible for identifying the overall degree of effect a planned project has on the resources being protected or managed. FDOT has published the “ETDM Interim Guidelines” (a 12-chapter procedural document), and the basis for entry of “degree of effect” in the EST is detailed in those guidelines (FDOT, 2003). This entry provides a color-coded and numeric indication of a project’s effect from the perspective of various technical issues and from various issues related to the community. This provides a quick overview that allows a person to focus on key issues identified in summary reports.

Summary Reports

Each phase of the ETDM Process is concluded by preparation of a summary report. Summary reports are actually “virtual reports” since the EST assembles all information received from the public and from ETAT members. Elements of the summary reports may be printed and distributed, but it is intended that these reports will largely be viewed on-line and not copied and produced wholesale in hard copy. Constituents who do not have access to the Internet or to home computers will continue to receive hard copy information from MPOs or from FDOT through traditional sources.

The summary reports provide the feedback requested by agencies during early multi-agency meetings about how their participation in the ETDM Process led to better decisions. The summary reports also contain specific scope requirements to be addressed in project development.

Dispute Resolution

Agency Commitment

Agencies may not always agree with each other about how to resolve adverse effects. FDOT may not agree with agencies about certain issues. One thing is agreed with by all agencies in the ETDM Process, however:

Disputes must be resolved before projects advance to the Work Program.

FDOT has worked with the multi-agency working group to develop a dispute resolution process that accommodates the above commitment. The process is diagrammed in figure 5.

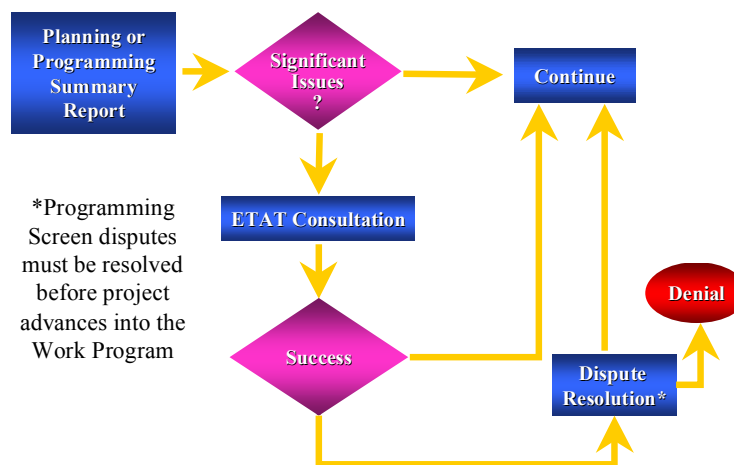


Fig. 5. Handling disputes.

Project disputes may be identified very early in planning during the “Planning Screen.” These issues may be addressed by planners at that time. Disputes identified during the “Planning Screen” do not preclude a project from advancing to the cost-feasible long-range transportation plan. As shown in figure 5, however, disputes at the Programming Screen phase must be resolved before the project advances.

Elevate to Resolve

The dispute resolution focus in the ETDM Process is to achieve resolution locally before elevating to state or federal agency heads and governmental officials. The overall process for dispute resolution is diagrammed in figure 6.

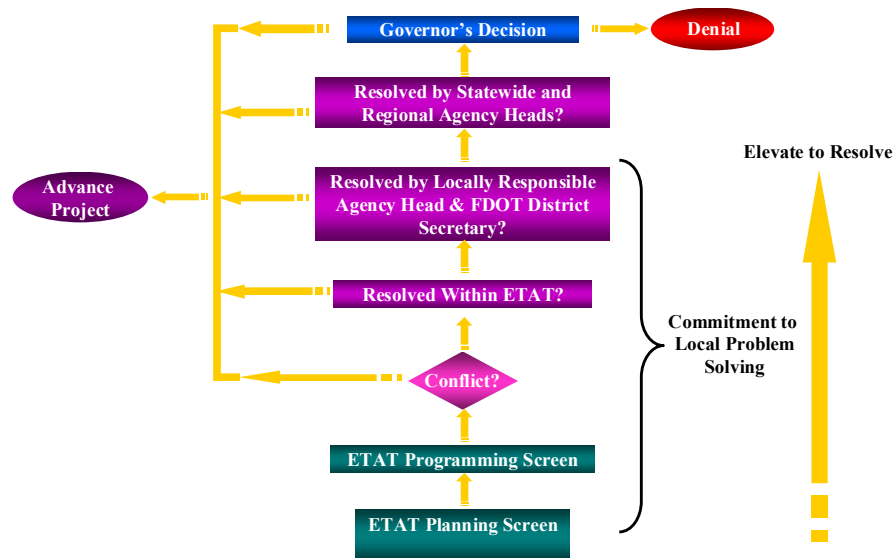


Fig. 6. Dispute resolution.

Within each of the seven geographic districts, FDOT has assembled an Environmental Technical Advisory Team (ETAT). The emphasis is on the word “team.” The local team under the leadership of the MPO and district ETDM coordinators will first work to resolve disputes. Consultation will occur within the ETAT. The ETDM Coordinator may use informal mediation within the district’s ETAT to achieve resolution. This is referred to as “informal dispute resolution” within the ETDM Interim Guidelines (FDOT 2003). If ETAT is unable to resolve the issue, then a white paper is prepared presenting positions and recommended solutions. That white paper is provided to local agency heads for their consideration. They may resolve the dispute locally or elevate it further to statewide agency heads, then the governor and to federal processes if necessary.

Benefits of Florida’s ETDM Process

- Early identification of avoidance/minimization options
- Socioeconomic effects balanced with natural environment
- Disputed projects addressed before programming
- Attention focused on key technical issues - not on proving the negative
- Agencies and affected community have ready access to quality data
- Summary reports provide feedback

Biographical Sketch: Tom Turton is a vice president in the Tampa office of URS Corporation. His entire career has been in consulting engineering and in recent years he has been intensively involved with environmental review of transportation projects. Through experience gained managing the NEPA process on the last Florida high-speed rail project, Turton gained insight into processes that can improve how transportation decisions are made. He has subsequently managed the URS contract with the Florida Department of Transportation to develop Florida’s ETDM Process.

References

Florida Department of Transportation. 2003. “ETDM Interim Guidelines, Efficient Transportation Decision Making.” Tallahassee, Florida.