

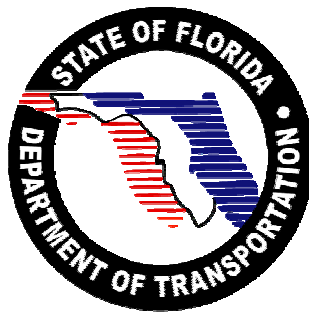
South Florida East Coast Corridor Transit Analysis Study

Miami-Dade, Broward and Palm Beach Counties

Methodology Technical Memorandum For Tiered Programmatic Environmental Impact Statement

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Prepared for:



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A. PURPOSE OF THIS TECHNICAL MEMORANDUM

The environmental review process has begun for the Federal Transit Administration (FTA) and Florida Department of Transportation (FDOT) on the South Florida East Coast Corridor Transit Analysis (SFECCTA) Tiered Draft Programmatic Environmental Impact Statement (PEIS). This memorandum is designed to outline and explain the rationale for the intended Tiered PEIS process, provide the methodology (with specific environmental issue examples) to be employed in both tiers of the study, and to illustrate the timeline for submitting required project documentation to the FTA for approval and federal funding eligibility.

Completing a tiered EIS for particularly large projects may significantly reduce the amount of time needed to complete the NEPA process. For large projects, the local transit agency can complete an EIS to evaluate a broad program or a policy statement. Subsequent Statements (EIS, EA, or CE) can then be prepared for site-specific actions, only summarizing the issues discussed in the broader statement. Tiering reduces repetitive discussion of the same issues, allowing attention to be given to issues that are ready for a decision (<http://www.environment.fta.dot.gov/DECISION/PROC.ASP>). Tiering in this study involves preparing and circulating a PEIS, with detailed environmental analysis and public involvement to be continued and expanded as necessary for each individual segment studied in Tier 2.

The SFECCTA study area originally followed the FEC Railway right-of-way from approximately West Flagler Street in Downtown Miami to Indiantown Road in Jupiter (approximate 82-mile length) but has been extended three miles north to the Town of Tequesta and the Palm Beach/Martin County Line (a total north-south distance of 85 miles). With side connections to seaports and airports, as well as the South Florida Rail Corridor (SFRC) where Tri-Rail currently operates, the total linear length of the study corridor is approximately 100 miles (see the enclosed project location map). A 2-mile wide study area centered on (but not biased towards) the FEC Railway corridor was chosen for data collection and analysis purposes during the first tier of the study ("Tier 1"), resulting in over 200 square miles of area in which to collect and evaluate data. This large study area is intended solely for purposes of selecting the most logical, feasible and environmentally responsible alignments for the Alternative Alignments analysis (a primary element of Tier 1). **However, it is crucial to note that the anticipated direct impacts from any transit improvements (not predetermined as rail, bus or other technology) would likely be restricted to only several hundred feet at most from whatever chosen alignments and/or station locations are carried into Tier 2 of the Tiered Environmental Impact Statement.**

In addition, **it is not yet determined whether the alignment will follow roadway or railway, and what number of tracks or buslanes (for example) are ultimately required**, since these issues are best analyzed towards regional assessment in Tier 1 rather than studying piecemeal projects at the municipal or even county-wide basis. The project corridor traverses Miami-Dade, Broward and Palm Beach Counties while possibly extending into south Martin County for potential maintenance yard siting at the northern terminus of the study area. This corridor generally parallels Dixie Highway and US-1. The SFECCTA study area is served by existing Tri-County Commuter Rail (Tri-Rail)

service that could be complemented and enhanced by new service and/or connections to employment and residential centers that are adjacent or near to the FEC Railway right-of-way. This would alleviate concerns that new transit provided by the SFECCTA would necessarily divert ridership from Tri-Rail (it need not since SFECCTA is looking into alternative transit services with different markets, service points, technologies, and therefore frequencies and speeds).

Therefore, it is important to note that the SFECCTA Study Corridor (**not impact area, which will be much narrower**) is defined as the area that is approximately one mile on each side of the FEC Railway right-of-way for its approximate total 100-mile linear length in the tri-county area. **Equally important to note is that the emphasis of the study in Tier 1 for the PEIS, and the role of resource agency reviewers is requested to focus on the indirect (previously referred to as secondary) and cumulative, regional issues and effects of the project** (both beneficial, as compared to alternatives to managing congestion on roadways from increasing population pressures, and adverse effects). One such example of a potential beneficial effect is that a regional premium transit system would support Florida's EastwardHo! Initiative and foster sustainable development within the SFECCTA study area (currently experiencing rapid redevelopment in a growing number of locations such as, but not limited to, Miami, Ft. Lauderdale, and Deerfield Beach). Potential benefits may also include reduced air quality impacts from roadway congestion, as well as stimulation of local economic redevelopment and enhanced environmental justice/equity due to transit oriented development which can provide defined percentages of affordable housing and local workforce employment opportunities.

B. OVERVIEW OF NEPA AND ETDM PROCESSES AND APPLICATION OF TIERING TO SFECCTA STUDY

OVERVIEW OF NEPA

Future stages of project planning implementation will include environmental documentation required under federal and state regulations. The SFECCTA project will have to follow the requirements of the National Environmental Policy Act of 1969 (NEPA) and the State of Florida's Efficient Transportation Decision-Making (ETDM) Process. The National Environmental Policy Act (NEPA) of 1969(42 USC 4332) requires environmental considerations to be included in project planning, along with technical and economic issues for projects that are at least partially federally-funded or have the involvement of federal agencies (i.e., require a permit from a federal agency).

The FTA has determined that under NEPA, transportation improvement projects can be assessed by one of three documents: an Environmental Impact Statement (EIS), an Environmental Assessment (EA), or a Categorical Exclusion (CE). NEPA documents are "full disclosure" documents, meaning that they assess the social, economic, and environmental effects, both positive and negative, of a proposed project. The full disclosure assessments in these documents enable decisions to be reached regarding which alternative/design is built. The NEPA process must be completed before final design, project construction, and, usually, right-of-way acquisition (see Ability to Purchase Right-of-Way During or After Completing TIER 1, page 15), can begin.

Generally, an EIS would be produced for a transportation project of substantial length or magnitude that has the potential to significantly affect the quality of the environment. An EA is typically produced for a shorter or less-intensive project (where the likelihood of significant impact is lower), and a CE is produced for a minor improvement with little likelihood of significant environmental impacts (i.e., resurfacing an existing roadway on its existing alignment). If an EA determines that significant impact is possible, then an EIS has to be produced, so projects with the potential for significant impacts usually start with an EIS. Both EIS and EA documents typically contain the following information:

- Purpose and Need for the Project. This section justifies the need for the project.
- Proposed Action and Range of Reasonable Alternatives to Implement the Proposed Action. This includes all alternatives under consideration, plus a “No-Build” alternative and a Transportation Systems Management (TSM) alternative that serves as a baseline for comparing the impacts of project alternatives.
- Description of the existing environmental setting of the areas to be affected. This includes the wide range of issues affecting the natural environment, socioeconomic environment, and cultural environment.
- Examination of the potential short-term, long-term and cumulative impacts on the affected environment.
- Description of measures to mitigate the identified effects of the project on these resources.
- Description of significant adverse impacts that cannot be avoided or adequately mitigated if the actions are implemented.

EIS documents are produced first as a Draft EIS, then a Final EIS. Once the Draft EIS has been prepared, accepted, and reviewed by the public, the comments on the Draft EIS are addressed in a Final EIS. Upon the completion of a Final EIS, the FTA, certifies that the process has been performed adequately, and issues a Record of Decision (ROD). Typically, it is at this point that right-of-way acquisition and construction can begin. EA documents are finalized with a Finding of No Significant Impact (FONSI). If no such finding can be made because a significant impact has been identified, then the EIS process begins.

THE CONCEPT OF A TIERED EIS

Environmental impact analysis under NEPA can be developed via a program-level document or a project-level document. A program-level document (Tier 1) is typically performed when a large physical area is being evaluated for a proposed project, or when a new program is being introduced that may have far reaching affects. A program level document typically looks at general environmental conditions and general levels of impact. Site specific issues and concepts are identified and designed in detail in later stages of project development via a project-level document or a series of project-level documents. When a broad general document (Tier 1) is followed by a number of more

detailed environmental documents (Tier 2), this is referred to as “tiering” or a tiered approach. This tiered approach is also sometimes referred to as a Phased Study or a Multi-level Environmental Analysis and Decision Making process or study. The staged approach to NEPA is described in the Council on Environmental Quality’s (CEQ’s) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR 1500 – 1508)¹. Tiering is also described in FHWA’s *Environmental Impact and Related Procedures* (23 CFR 771)². With a tiered approach, a draft and final EIS is prepared in each tier and a ROD is obtained at the completion of each tier. Tiering of environmental impact statements refers to the process of addressing a broad, general program, policy or proposal in an initial EIS, and analyzing a narrower site-specific or corridor-specific proposal, related to the initial program, plan or policy in a subsequent NEPA document such as an EIS, EA/FONSI, or CE. The appropriate NEPA document for the Tier 2 studies depends on the recommendations resulting from the Tier 1 analysis and the Class of Action (COA) Determination performed on each recommended alternative or individual project segment. The Class of Action (COA) Determination, and individual Advance Notification (AN), will be made at the beginning of Tier 2 for each project segment recommended at the outcome of Tier 1, perhaps in order of priority, or by some other scheduling process (see flowcharts of Tier 1 and Tier 2 processes attached).

The first tier (Tier 1) document allows an agency to focus on broad environmental issues which may correlate directly to early planning decisions, such as type, the general location, and major design features of a project. For large programs or regional projects like the SFECCTA with staged implementation schedules, the Tier 1 document can be a “Programmatic” EIS (PEIS). This program level approach provides the public, stakeholders and agencies with an opportunity to review the overall SFECCTA program concept and its potential benefits and impacts to the region. Following completion of this Tier 1 environmental process, specific alternative alignments and technologies (with associated facilities) would be developed and analyzed in subsequent project-level environmental documents (Tier 2). The second tier (Tier 2) documents involve environmental analyses and review that address a narrower geographic area, a more focused set of issues, and a specific proposed action. A Tier 2 document relies on a summary of the work in the Tier 1 document, thereby avoiding unnecessary repetition (Tier 1 work included by reference). This also allows the Tier 2 document to be focused on the additional details available in later stages of project planning such as design, construction, and operation of the proposed project. The tiered environmental process supports decision-making on issues that are ripe for decision and provides a means to preserve those decisions.

It is also important to note that the Tiered EIS approach does not mean:

1) That the environmental impacts of the proposed project(s) or program are greater, cover a larger area or that any one or more categories necessarily have significant effects. Tiering really has nothing to do with the level of environmental effect, whether positive or negative. Tiering simply breaks down the decision making

¹ Specifically, 40 CFR 1502.20

² Specifically, 23 CFR 771.111(g)

process into two steps with the broad, regional issues and alternatives being grouped together and addressed in the first tier process/documents and then followed by more specific issues grouped and addressed in the second tier process/documents. The Tiered EIS process actually allows the agency to determine with certainty the level of effect from the agencies and public early on so that only the necessary level of environmental analysis is performed in Tier 2 (possibly EA's and Cat-Exclusion Type 2 only for individual segments). The environmental tiering process allows for earlier identification and clarification of potential environmental impacts, especially focusing on indirect and cumulative effects, and of subsequent processes for addressing potential adverse impacts in Tier 2. It also avoids segmentation concerns that can arise when large projects are developed in a series of related but separate studies.

2) That the agency must perform an additional level of analysis resulting in additional costs, and causing delays to overall project implementation. Tiering does not result in any additional effort or cost and actually reduces effort and costs when applied appropriately. Tiering actually saves time and money by: a) addressing the broad, regional or system wide issues and alternatives first, b) obtaining feedback and resolution of these issues and alternatives, c) segmenting the project into more manageable project sections with logical termini from both an engineering and environmental perspective, and d) preparing focused/streamlined Tier 2 documents for individual segments and detailed alternatives over time as necessary. Additionally, any location or segment specific controversies may not affect the entire program and Tier 2 documents can be prepared concurrently and independently. Tiering also allows for some R/W preservation or acquisition after Tier 1 which can save considerable time and money particularly in redeveloping areas.

OVERVIEW OF ETDM (EFFICIENT TRANSPORTATION DECISION MAKING)

The Transportation Equity Act for the 21st Century (TEA-21), which was passed by Congress in July 1999, contained initiatives for planning transportation projects and conducting environmental reviews that are known as "streamlining" provisions. The objectives in 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 regarding the amount of time it takes to implement a transportation project. In addition, departments of transportation, agencies, citizens and non-governmental organizations have seen the inefficiency in implementation of the NEPA environmental reviews when long time periods elapse between agency NEPA reviews and the environmental reviews conducted during project permitting. 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. 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 new Efficient Transportation Decision Making (ETDM) process for the State of Florida, the FDOT implemented an Internet-accessible interactive database tool, which is in current use by the review agencies as they review the SFECCTA in Tier 1.

FDOT has also formed "Environmental Technical Advisory Teams" (ETATs), consisting of representatives from agencies which have statutory responsibility for issuing permits or conducting consultation under NEPA. The ETAT membership for FDOT Districts 4 and 6 is provided as an addendum with this memorandum. The ETAT members comment on the project based on information presented (or "loaded") in the Environmental Screening Tool (EST), operated and maintained at the Florida GeoPlan Center at the University of Florida in Gainesville, Florida (<http://www.geoplan.ufl.edu/>).

An innovative technology application, the EST provides a vital foundation to the ETDM process, supporting agency participation and community involvement throughout the project life cycle. The EST is an Internet-accessible application that provides tools to input and update information about transportation projects, perform standardized analyses, gather and report comments about potential project effects, and provide information to the public. The EST user community includes staff from 7 FDOT district offices, 26 Metropolitan Planning Organizations (MPOs), approximately 26 resource agencies, and the general public (public access via <http://etdmpub.fla-etat.org/>). Each FDOT District has an ETDM Coordinator, and for the SFECCTA the District IV Coordinator is the lead ETDM contact for EST implementation. The ETDM project number established for Tier 1 of the SFECCTA is 7519.

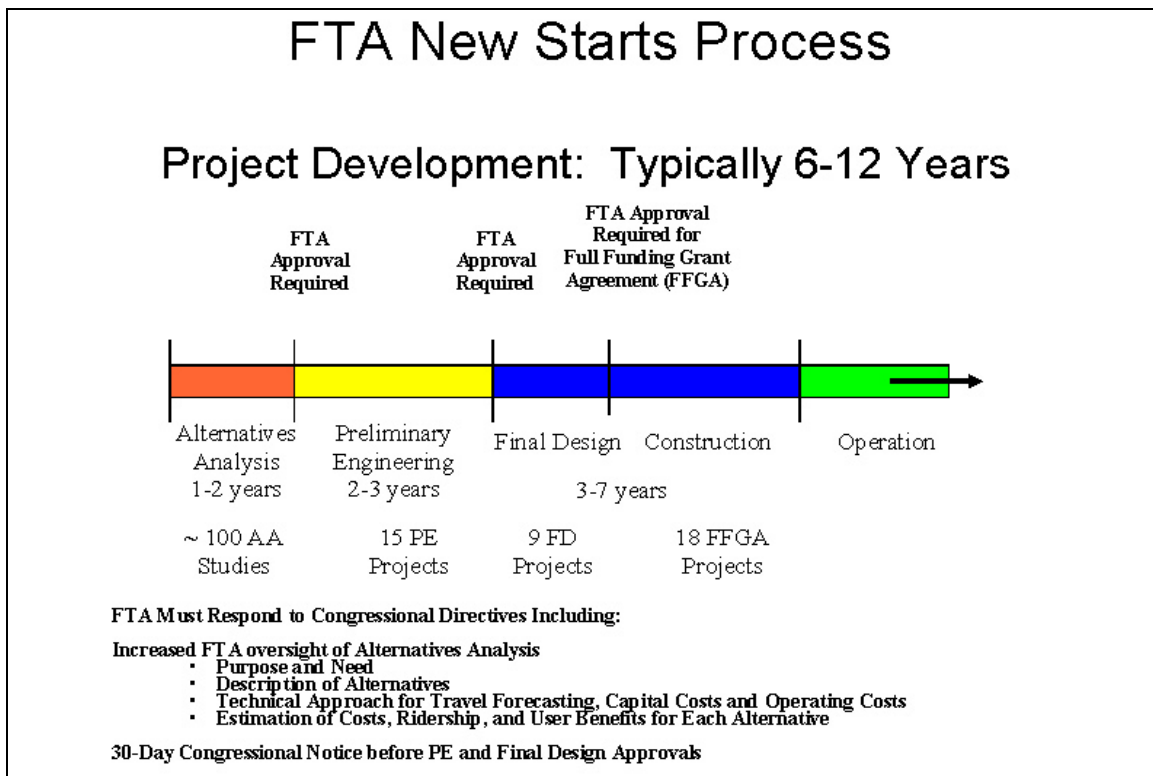
The ETDM process in many ways parallels the NEPA process, though some facets of it are slightly different. The State of Florida developed the ETDM, as a way of enacting the streamlining provisions in TEA-21, to incorporate the consideration of environmental factors into the existing planning, review and decision-making processes of the State, regional and local government agencies at the earliest possible time. To accomplish this goal, ETDM requires that all agencies determine whether the actions they directly undertake, fund or approve may have a significant impact on the environment, and, if it is determined that the action may have a significant adverse impact, prepare or request an EIS.

The actions envisioned in Tier 2 of the SFECCTA Study, insofar as they will require local, regional or state approvals, must comply with the ETDM process before they can be implemented. Most, if not all, of the recommendations by FDOT in the SFECCTA (technologies, alternative alignments, station locations, etc.) will need to be reviewed for their potential impacts on the environment. If in reviewing the actions, any of the agencies that have some control or approval over them find that the actions *may* have a potential impact on the environment, then an EIS under ETDM will need to be prepared for the individual project sections in Tier 2.

APPLICATION OF TIERING TO SFECCTA

The SFECCTA is unique in south Florida and warrants a Tiered PEIS process to streamline the process for the following reasons:

1. Transit programs like the SFECCTA extend over long time frames (decades) due to the scale of the investment it will likely entail and the different geographic regions, technologies or alignments selected for advancement in Tier 1. Tier 2 time frames are also extensive for the above reasons and since the FTA New Starts funding process begins as each individual segment is studied in further detail as independent NEPA documents. The FTA time frame for New Starts projects is shown below and usually entails 6 to 12 years of Alternatives Analysis (AA), Preliminary Engineering (PE), Final Design (FD), and Construction phases. Note that while the time frame for Project Development is based on FTA experience with over 100 project studies nationwide, in Florida the average NEPA review time is currently averaging about 5 years just for the NEPA study and approval alone (corresponding to the PE phase shown below).



2. Its overall length (85 miles north to south, 100 miles with connecting tracks to seaports, airports and other rail lines under consideration).
3. Its multiple project termini options (3 southern options in Miami, north termini not yet fully determined).
4. Its Maintenance and Operations Facilities (MOF)/rail yard location siting options.
5. Its large geographic study area (203 square miles utilizing a 2-mile wide study area centered on the FEC Railway over 100 miles of track).
6. The multiple jurisdictions and political boundaries traversed, including three counties (Miami-Dade, Broward, and Palm Beach Counties), and 47 municipalities (28 directly adjacent or bisected by the FEC Railway).

7. The numerous transit-dependent population centers, transit attractors such as airports, seaports, universities, CBDs and key commercial corridors, etc.
8. The FEC Railway is an existing freight corridor under private ownership (freight service must be maintained).

Because of the length (and broad study area) and the anticipated timeframe of transit service implementation along the SFEECC Corridor, the approach to NEPA documentation will be utilizing the concept of a “Tiered PEIS” to cover the entire project, as described at 23 CFR 771.111(g). Tiering is an option available to organize analysis and decision-making in complex circumstances in a way that takes into account the different geographic scope and timing for different decisions. As the implementation of passenger transit service along the SFEECC would likely take place incrementally over a period of time, the Tiered PEIS is considered a comprehensive, valid approach to the NEPA process for this project.

The Tiered PEIS approach to the SFEECC will allow FDOT to identify a set of prudent and feasible build alternatives to move forward into Tier 2. (No-Build and TSM Baseline alternatives will be included in both tiers.) This first effort will produce a Tier 1 PEIS that focuses on broad, regional issues such as general location and logical termini, mode choice, area-wide air quality and environmental impacts as well as land use implications of the major alternatives. The Tier 1 PEIS will include fact-based analyses to support informed decision-making on corridor-length issues. The Tier 1 PEIS will determine which portions of the project have “independent utility,” meaning where the logical termini are for breaking the overall study area into smaller discrete segments that are logical from a transportation and environmental perspective.

Sample Environmental Analyses utilizing a phased, tiering approach

The following examples of tiered environmental analyses are provided to illustrate the methodology in three areas of NEPA studies; Social, Natural, and Physical environmental issues. There will be at least 12 such topics in the Affected Environment and Environmental Consequences chapter of the Tier 1 PEIS, each of which will be assessed, evaluated, and documented in a similar phased approach. The three examples for these categories are Socio-cultural Effects (for the social environment), Wetlands/Essential Fish Habitat (for the natural environment), and Noise/Vibration (for the physical environment), as provided below:

Socio-cultural Effects Tiered Analysis: the PEIS will focus on assessing regional indirect and cumulative Sociocultural Effects, as well as other natural and physical environmental issues, to comply with NEPA.

Tier 1: Perform Initial Screening Level Sociocultural Effects Assessment. Not only will the Tier 1 PEIS allow an appropriate level of analysis for Sociocultural Effects on the most critical of the many historic and archaeological sites or districts (including the FEC Railway itself as a linear historic resource), but the PEIS will also be an opportunity to begin early coordination with communities that may involve Environmental Justice concerns. Environmental Justice, as outlined in Executive Order 12898, signed in 1994, reaffirms Title VI of the Civil Rights Act principles which state that agencies must identify and address any

disproportionately high and adverse human health or environment effects from projects and programs on minority as well as low-income populations. The study will identify these populations and document the positive or adverse effects of providing additional mobility options for all populations in the corridor while assuring that any negative impacts of the proposed project are not disproportionate to low income and minority populations in the corridor.

The regional, macro-level analysis conducted under Tier 1 will also comply with other requirements such as Section 106 through a similarly tiered/phased Cultural Resources Assessment to screen the relative effects that the various alternatives being evaluated would have on currently known historic properties and properties that may be listed, eligible or potentially eligible for listing on the National Register of Historic Places (NRHP). In Tier 1 this will be accomplished through coordination with the State Historic Preservation Office (SHPO) and development of a Cultural Resources Reconnaissance Report, leading to an initial letter on the project from SHPO. The benefit of such a tiered approach to cultural resources on a large scale project with numerous significant or potentially significant resources is that Tier 1 focuses on known significant resources, resulting in fewer site reviews than provided in a full Cultural Resources Assessment Survey (CRAS). This allows SHPO to review the broad scope of historic/archaeological resources in Tier 1 with screening and removal of non-significant sites.

Tier 2: Conduct a more traditional, detailed Section 106 Process for individual segmental projects, as outlined below:

- Establish an Area of Potential Effect (APE) for each projects' Preferred Alternative
- Identify and evaluate resources through CRAS reports and/or Florida Master Site File (FMSF) forms
- If Resources within APE are found that are NRHP-listed or eligible:
 - 1) prepare case study
 - 2) assess effects
 - 3) SHPO coordination
 - 4) Public involvement
 - 5) Develop avoidance, minimization, and mitigation strategies, if needed

Wetlands/Essential Fish Habitat Tiered Analysis: the PEIS will focus on assessing regional indirect and cumulative effects for Wetlands (and Essential Fish Habitat as defined in the Magnuson-Stevens Fishery Conservation and Management Act) to comply with NEPA by

Tier 1: Perform Initial Screening Level Wetland and/or Essential Fish Habitat Assessments along the entire SFECCTA Corridor – accomplished primarily by examination of existing and proposed land uses, other reports/studies, to quantify per alignment the following:

Identify wetland “polygons” included in the U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) classification system categories:

Marine System: - **Open ocean overlying the continental shelf and its associated high-energy coastline.**
 - **Shallow coastal inundations or bays without appreciable freshwater inflow.**
 - **Coasts with exposed rocky islands that provide the mainland with little or no shelter from wind and waves.**

Estuarine System: - **Deepwater tidal habitats and adjacent tidal wetlands** (including areas where Red mangroves *Rhizophora mangle* and eastern oysters *Crassostrea virginica* occur). Estuarine systems include both subtidal and intertidal subsystems.

Riverine System: - **Wetlands and deepwater habitats contained within a channel** (with exceptions of certain forested, shrubby, emergent vegetated wetlands or habitats with water containing ocean-derived salts in excess of 0.5%).

Lacustrine System: - **Permanently flooded lakes and reservoirs, intermittent lakes, and tidal lakes with ocean-derived salinities below 0.5%.** Also include limnetic and littoral subsystems.

Palustrine System: - **All nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens,** (and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%). Includes wetlands traditionally called marshes, swamps, bogs, fens, and prairie in the United States, as well as small, shallow, permanent or intermittent water bodies called ponds.

- Perform GIS analysis from aerial photos and land use data to augment GIS analyses reported through Florida’s ETDM
- Coordinate with ETAT review agencies through Florida’s ETDM
- Perform reconnaissance level field survey to augment and field verify data

Tier 2: Perform Wetland Evaluation Reports/Essential Fish Habitat Evaluations per project segment in a stepwise assessment process, as follows:

Wetland Assessments:

- Assess distance to/from initial alignment alternatives to the resource (wetland and/or water body)

- Evaluation of potential for impact (indirect and direct, as well as cumulative impacts) due to proposed projects during alignment/alternative screening evaluations to allow for avoidance and minimization considerations.
- Update GIS analysis from Tier 1 regional studies with current aerial photos and land use data to augment Tier 1 studies and Tier 2 GIS analyses reported through Florida’s ETDM (to be conducted on each segmental Tier 2 project study)
- Coordinate with ETAT review agencies through Florida’s ETDM per segment.
- Conduct Detailed Wetland Evaluation Report (WER), as necessary (some segments may not cross or be adjacent to wetlands or waterways) for each segmental Tier 2 project study.
- Develop project specific mitigation plans for any unavoidable wetland impacts identified in these studies.

Essential Fish Habitat (EFH) Biological Assessment/Evaluation (BA/BE) Studies:

- Assess distance to/from initial alignment alternatives to the resource (wetland and/or water body)
- Evaluation of potential for impact (indirect and direct, as well as cumulative impacts) due to proposed projects during alignment/alternative screening evaluations to allow for avoidance and minimization considerations.
- Update GIS analysis from Tier 1 regional studies with current aerial photos and land use data to augment Tier 1 studies and Tier 2 GIS analyses reported through Florida’s ETDM (to be conducted on each segmental Tier 2 project study)
- Coordinate with ETAT review agencies through Florida’s ETDM per segment.
- Conduct Detailed EFH Biological Assessment/Evaluation (BA/BE) Studies, as necessary (some segments may not cross or be adjacent to wetlands or waterways) for each segmental Tier 2 project study.
- Develop project specific mitigation plans for any unavoidable wetland impacts identified in these studies.

Transit Noise and Ground-Borne Noise/Vibration Tiered Analysis: the PEIS will focus on assessing regional indirect and cumulative effects for Transit Noise and Vibrations to comply with NEPA by a two phase/tiered approach, as follows:

Tier 1: Perform Initial Screening Level Noise & Vibration Analyses along the entire SFECCTA Corridor – accomplished primarily by examination of existing and proposed land uses, other reports/studies, to quantify per alignment the following:

Identify Noise Sensitive Sites (“Receptors”) in these categories:

- Category 1:
- **Parks,**
 - **Outdoor amphitheaters and concert pavilions,**
 - **Residential areas.**
 - **National Historic Landmarks** (with significant outdoor use).

- Category 2: - **Homes, hospitals** and **hotels/motels** (buildings where people normally sleep)
 - **Historical sites currently used as residences.**
- Category 3: - **Schools,**
 - **Libraries,**
 - **Religious worship buildings** (churches, synagogues, **mosques, etc.**),
 - **Auditoriums** (or other institutional land uses with primarily daytime use),
 - **Medical offices,**
 - **Recording studios or concert halls,**
 - **Cemeteries, monuments, museums** (locations for meditation or study)
 - **Historical sites, parks and recreational facilities** (certain types).

Identify Ground-Borne Noise and Vibration Sensitive Sites (Buildings) in these categories:

- Category 1: - **Vibration sensitive research and manufacturing** (i.e. microelectronics, optics, etc.),
 - **Hospital operating theaters,** and **laboratories.**
 - **Concert halls, auditoriums, and theatres,** and **radio, television or recording studios.**

- Category 2: - all **residential** buildings, and
 - all **hotels/motels** (buildings where people normally sleep).

- Category 3: - **Schools/libraries/auditoriums,** i.e., Institutional buildings with sensitivity to vibration (“special buildings”), and
 - **Religious worship buildings.**

- Perform GIS analysis from aerial photos and land use data
- Perform reconnaissance level field survey to augment and field verify data

Tier2: Perform General and Detailed Noise and Vibration Analyses per project segment in a stepwise assessment process, as follows:

Noise Studies:

- Assess distance to/from initial alignment alternatives (to the Property Line and to Outside of Structure)
- Evaluation of Cumulative Noise Exposure (difference between increases in existing noise levels and increases in transit noise due to proposed project)
- Conduct Noise Screening Procedures (primarily distances from project to sensitive receptors unobstructed vs. obstructed by intervening buildings).
- Conduct General Noise Assessment as extension of Noise Screening Procedure, where necessary, as initial corridor planning tool (generate Noise Impact Contours, Noise Mitigation Effectiveness Estimates)
- Conduct Detailed Noise Analysis - part of Preliminary Engineering (once location, alignment, mode and operating characteristics of the transit system

are determined) for projects not passing Screening or General Assessments. Predictions on effectiveness of noise mitigation measures on identified noise sensitive receptors would be modeled and reported here.

Ground-Borne Noise and Vibration Studies:

- Assess distance to/from initial alignment alternatives
- Conduct Vibration Screening Procedures to identify projects with little possibility of creating adverse impact. Develop “Screening Distances” for the various transit alternatives and “Critical Distances for Land Use Categories” as outlined in Tier 1.
- Conduct General Vibration Assessment as extension of Vibration Screening Procedure, where necessary, as planning tool to compare alternatives by defining curves, or sets of curves, predicting overall ground-surface vibration (related to distance from source), selecting “Base Curve” depending on mode of transit under consideration (“technology”). Also Inventory “Vibration-Impacted Locations”.
- Conduct Detailed Vibration Analysis for projects not passing Screening or General Assessments. Level of detail much greater, to include tests of the proposed transit vehicles, tests at sites (or representative sites) identified at risk for vibration impacts, during project final design of the selected alternative. This analysis also entails designing mitigation measures for the measured or predicted vibration impacts to sensitive sites.

C. RESULTS OF TIER 1 AND TIER 2

The Tier 1 PEIS should be thought of as a program-level (programmatic) document. This NEPA document will identify the overall transportation purpose and need with key environmental resources identified throughout the project study area. Broad scale assessment of social, cultural and community level needs as well as natural and physical environmental issues will be assessed along with transit-related issues such as mobility and transportation needs, logical termini and project segments.

The figures provided at the end of this memorandum are work flowcharts adapted from the FDOT PD&E Manual and FTA guidance materials, and are designed to show the intended process to be followed.

RESULTS OF TIER 1

The focus of Tier 1 is on the broader, regional issues, especially indirect (secondary) and cumulative effects. Results of Tier 1 will include:

- An inventory of the “physical plant” of the SFECC – existing conditions of transportation features (i.e., right-of-way, bridges, etc.) along the corridor
- An analysis of the travel markets along the corridor through the tri-county area – origins and destinations from a sampling of motorists and transit riders
- An analysis of freight service as it pertains to the SFECC throughout the region
- A financial analysis of current, future and potential funding sources

- An evaluation of municipal land use ordinances and trends along the corridor
- A summary of existing environmental resources and potential impacts, including but not limited to a screening of key issues such as sociocultural, historic and archaeological effects, wetlands, essential fish habitat, wildlife and habitat (including endangered and threatened species), navigation, permits, contamination, noise and air quality, and construction impacts, among others
- A summary of public input received from public meetings, surveys, project website and other sources
- A screening of the first tier of transit technology alternatives
- Segmentation and prioritization of the corridor for more detailed study in Tier 2
- Commitments to keep resource agencies involved in Tier 2 that address more specific “effects”, allowing the review process to continue into the next level of the NEPA process.

Decisions in Tier 1 PEIS

The anticipated decisions to be made by local transportation officials at the end of Tier 1 include:

- Identify Non-viable Tier 1 Alternatives
- Identify Potential Project Concepts (modal choice, alternative technologies) to advance into Tier 2
- Identify Logical and Independent Project Segments to advance in Tier 2
- Prioritize Project Segments for Tier 2 (AA/NEPA study, design, and construction)
- Complete PEIS and Obtain Tier 1 ROD, outlining commitments and recommendations for further study in Tier 2 analyses
- Seeking Local Commitments, Obtain Municipal Support (land use designations favorable to transit and local funding participation)

Agency Review and Feedback in Tier 1

Input being sought from the various agencies involved in reviewing the SFECCTA includes:

- Identify priority resources
- Utilize FDOT’s EST to input or update resource data
- Review and indicate consistency with agency’s statutory authority
- Review and comment on the Purpose and Need Statement (necessary for FTA)
- Input commentary on potential effects (**primary emphasis to be on regional direct and indirect, cumulative effects, both beneficial and adverse**)

- Assign a degree of affect on particular resource(s)
- Identify necessary technical studies or analyses
- Identify and document need for further agency involvement or potential for a dispute
- Review and comment on project alternatives
- Identify potential initial avoidance, minimization and/or mitigation measures
- Identify permissibility issues
- Review and comment on community issues and public concerns

More about the Tier 1 Regional Transit Alternatives Analysis

This Tier 1 Analysis will result in a Regional Transit Alternatives Analysis that will evaluate logical corridor segments for implementation, preferred technologies (e.g., rail, bus, etc.) and alignments through areas with heavily-congested roadways and underserved transit-dependent populations, and focus on indirect and cumulative effects. Commitments can be developed and included in each tier to continue resource agency review and inter agency coordination, beginning with the coordination process begun in the Tier 1 PEIS process.

Tier 1 Scope of Work Tasks and Deliverable Documents

The major work tasks and environmental deliverables will include the following:

1. AN Package and EST (ETDM) Project Information with GIS analyses
2. Notice of Intent (NOI) for the Tier 1 Programmatic Environmental Impact Statement (PEIS) – Published in Federal Register March 28, 2006
3. Data Collection
 - Social Data (land use, historic, etc.)
 - Natural Data (water quality, floodplains, etc.)
 - Physical Data (noise, air, contamination)
4. Land Use Analysis (28 municipalities on FEC Railway corridor, 47 in SFECCTA)
 - Corridor Wide Analysis
 - Precedent Study Analysis (3 locations)
 - Physical Analysis of Urban Conditions
5. Regional Impact Assessment
6. Scoping Report – Ongoing
7. Cultural Resource Analysis and Reconnaissance Report – Ongoing
8. Existing Environmental Conditions/Affected Environment Technical Memorandum - Ongoing
9. Tier 1 Programmatic Environmental Impact Statement (PEIS)
10. Tier 1 Record of Decision (ROD)

Ability to Purchase Right-of-Way During or After Completing TIER 1

The ability to purchase railroad right-of-way **before** completing Tier 1 may be considered by FTA under Section 3024 of SAFETEA-LU, amended 49 USC 5324, as a “separate action” from NEPA for preservation of railroad corridor for pending transit projects (“Corridor Preservation”). However, the ability to purchase non-railroad right-of-way even after completing Tier 1 will be limited. The Tier 1 phase will examine

which, if any, individual parcels can be purchased or otherwise preserved for future transportation improvements. A Tier I PEIS, once reviewed, does not in itself necessarily lead to pre-award authority to acquire right-of-way. In a Federal Register notice published on November 30, 2005 outlining changes resulting from the SAFETEA-LU (http://www.fta.dot.gov/legal/federal_register/2004/16290_17929_ENG_HTML.htm, page 71976), it states "When a tiered environmental review in accordance with 23 CFR 771.111(g) is being used, pre-award authority is NOT provided upon completion of the first-tier environmental document except when the Tier-1 ROD or FONSI signed by FTA explicitly provides such pre-award authority for a particular identified acquisition."

Consequently, FTA will need to explicitly state in the ROD that pre-award authority is granted for right-of-way purchases for those parcels FTA determines have been adequately identified and evaluated in the PEIS. FDOT may then purchase these parcels with the guarantee that they will be eligible as match towards a future federal project. However, it is further anticipated that FDOT cannot actually use the parcels for a project until the Tier 2 NEPA document is completed. For example, FDOT may purchase a parcel of land adjacent to or in the SFECCTA Corridor after receipt of the Tier 1 ROD and decide that the land could be used for park-and-ride lot in advance of the New Starts project coming on-line. In this hypothetical case, FDOT would need to prepare a Tier 2 NEPA document (CE, EA/FONSI or EIS/ROD, as appropriate) before proceeding with the interim project. Examples of what the SFECCTA advance acquisition of non-railroad right-of-way may be used for would include the following:

- transit terminals/station areas;
- maintenance and operating facility sites; and,
- transit alignments (off FEC Railway) and/or transit connections (e.g. to Tri-Rail or Metrorail) through non-railroad private property.

The Tier 1 work of the SFECCTA will provide opportunities for the local governments in the corridor to consider or modify their land use regulations in light of the Tier 1 results and anticipated real estate development trends. Tier 1 of the SFECCTA will lay the groundwork for a plan of action (i.e., a program) for these and other issues in Tier 2.

RESULTS OF TIER 2

The Tier 2 EIS phase of the SFECCTA will consist of subsequent Sectional Alternative Analyses and will produce separate Tier 2 Alternative Analysis and NEPA documents (EISs, EAs, CEs) for each segment of the project, addressing site-specific details on project impacts, costs, and mitigation measures. The individual segments for Tier 2 are not yet known and will be identified at the completion of Tier 1. As each Tier 2 NEPA document is completed and approved by the FTA, the New Starts Funding Process can then continue for that segment. Traditional CRAS reports will be prepared for each project in Tier 2 in accordance with the PD&E Manual in coordination with the SHPO. Likewise, all other environmental resource agencies (e.g. USFWS, NMFS, FWC, USCG, USACE, other federal, State, and local entities) will be included in the normal NEPA process of study and interagency coordination for each project segment.

The Tier 2 EIS for the SFECCTA should be thought of as a program of project-level NEPA documents. Each of the Tier 2 NEPA documents is procedurally connected to, and is consistent with, Tier 1. This phase will require a more detailed purpose and need tailored to each independent segment. This phase will also develop a more detailed alignment configuration, and more detailed environmental field assessment and impact evaluation with very close, specific resource agency coordination. A preferred alternative will be selected and a specific mitigation plan will be developed for each Tier 2 segment, as necessary. Specific detail on costs will also be provided in the Tier 2 EIS sectional studies.

D. SUMMARY AND CONCLUSIONS

- Environmental Tiering is the most logical and practical way to conduct the SFECCTA Study, allowing the agencies to focus on the issues which are ripe for decision, exclude from consideration issues already decided or not yet appropriate, and provides a means to preserve any decisions that are made. It is also one of the tools and techniques that are available to implement Environmental Stewardship and Streamlining, helping resolve “big picture issues” early on in the project development process.
- From a regional perspective, it makes sense to address the future of this corridor using a holistic approach. In addition, Florida East Coast (FEC) Industries has indicated to FDOT that it will not consider a piecemeal approach to any agreement pertaining to its right-of-way through the region. A master plan approach will be facilitated by the Tiered PEIS process.
- Conducting the Tiered PEIS process is not so different from what agencies in Florida are already used to doing. Agencies have worked with NEPA documents before - the Tier 1 PEIS from this study will only be considered being more “global” than many other EISs that have emerged in South Florida transportation studies.
- The philosophy behind the State’s ETDM process is that agency outreach and NEPA review be conducted early on and expedited throughout the project cycle implementing “environmental streamlining” concepts. That is exactly what will occur under the subject Tiered PEIS approach. Furthermore, this project is already under review using the ETDM process (ETDM Number 7519).
- FDOT may have FTA support to acquire railroad right-of-way during Tier 1 under the provisions of SAFETEA-LU but more limited ability to purchase non-railway right-of-way in the SFECCTA even after successful completion of Tier 1. Any accommodation for advance right-of-way acquisition in the SFECCTA may be considered a benefit in rapidly developing Southeast Florida.
- Population growth, land use development activity and the resultant travel demand in the corridor (and throughout the region, in general) require State and local transportation and environmental professionals to seek the most efficient and expeditious processes and solutions. The Tiered PEIS approach to the SFECCTA

will save time by reducing repetitive discussion on same issues, and forcing deliberate focus on those issues ready for decision.

- Large infrastructure costs and lack of local public funding sources at this time will likely make full implementation along the entire study corridor a long-term process accomplished over many years. The Tiered PEIS will allow for separate, logical priority segmental projects to be constructed over a long time period.
- This Tiered environmental impact analysis approach lends flexibility to the implementation process, possibly with different implementation scenarios of segments and/or technologies that also may allow projects to proceed on different time lines (concurrent, sequential or mixed).

ADDENDUM – SFECCTA ETAT MEMBERSHIP

FDOT District 4 ETAT Members	
Role	Agency
ETDM Coordinator	FDOT District 4
CLC Coordinator	FDOT District 4
CEMO Liaison	FDOT District 4
MPO ETDM Coordinator	Indian River County MPO
MPO ETDM Coordinator	Broward County MPO
MPO ETDM Coordinator	St. Lucie MPO
MPO ETDM Coordinator	Indian River County MPO
MPO ETDM Coordinator	Broward County MPO
MPO ETDM Coordinator	Palm Beach MPO
MPO ETDM Coordinator	Martin County MPO
ETAT Member	US Army Corps of Engineers
ETAT Member	National Park Service
ETAT Member	Saint Johns River Water Management District
ETAT Member	FL Department of State
ETAT Member	US Coast Guard
ETAT Member	Federal Highway Administration
ETAT Member	Federal Highway Administration
ETAT Member	Palm Beach MPO
ETAT Member	FL Department of Agriculture and Consumer Services
ETAT Member	FL Department of Community Affairs
ETAT Member	Federal Transit Administration
ETAT Member	FL Department of Community Affairs
ETAT Member	National Marine Fisheries Service
ETAT Member	Federal Highway Administration
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	US Army Corps of Engineers
ETAT Member	South Florida Water Management District
ETAT Member	US Fish and Wildlife Service
ETAT Member	US Army Corps of Engineers
ETAT Member	FL Department of Transportation
ETAT Member	Federal Highway Administration
ETAT Member	FL Department of Environmental Protection
ETAT Member	National Marine Fisheries Service
ETAT Member	US Environmental Protection Agency
ETAT Member	Federal Highway Administration
ETAT Member	FL Department of Agriculture and Consumer Services
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	FL Department of State
ETAT Member	Miccosukee Tribe
ETAT Member	FL Department of Environmental Protection

FDOT District 4 ETAT Members	
Role	Agency
ETAT Member	Federal Transit Administration
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	US Environmental Protection Agency
ETAT Member	Natural Resources Conservation Service
ETAT Member	Seminole Tribe
ETAT Member	FL Fish and Wildlife Conservation Commission

FDOT District 6 ETAT Members	
Role	Agency
ETDM Coordinator	FDOT District 6
CLC Coordinator	FDOT District 6
CEMO Liaison	FDOT District 6
Public Information Officer	FDOT District 6
MPO ETDM Coordinator	Miami Urbanized Area MPO
ETAT Member	National Marine Fisheries Service
ETAT Member	Federal Highway Administration
ETAT Member	Natural Resources Conservation Service
ETAT Member	US Coast Guard
ETAT Member	Seminole Tribe
ETAT Member	Miccosukee Tribe
ETAT Member	National Park Service
ETAT Member	FL Department of State
ETAT Member	Federal Highway Administration
ETAT Member	US Fish and Wildlife Service
ETAT Member	South Florida Water Management District
ETAT Member	US Army Corps of Engineers
ETAT Member	FL Department of Environmental Protection
ETAT Member	Federal Transit Administration
ETAT Member	US Environmental Protection Agency
ETAT Member	FL Department of Community Affairs
ETAT Member	FL Department of Community Affairs
ETAT Member	FL Department of State
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	Federal Highway Administration
ETAT Member	FDOT District 6

FDOT District 6 ETAT Members	
Role	Agency
ETAT Member	FL Department of Agriculture and Consumer Services
ETAT Member	FL Department of Agriculture and Consumer Services
ETAT Member	FL Fish and Wildlife Conservation Commission
ETAT Member	FL Department of Transportation
ETAT Member	US Army Corps of Engineers
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