



Development of Activity-Based Travel-Demand Models for Florida:

An Assessment of Feasibility and Transferability using the National Household Travel Survey (NHTS) Data

presented to

Model Advancement Committee

presented by

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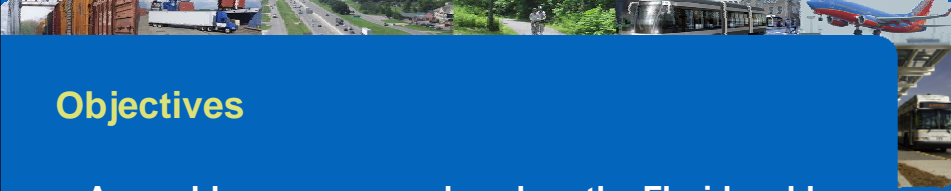
FLORIDA
MODEL
TASK
FORCE



Fundamental Questions

- Can the 2009 NHTS data support the development of DaySim-type ABMs for the different areas in Florida?
- How can the DaySim structure be modified/ enhanced/ simplified to meet the needs / data limitations in specific regions?
- Can the entire DaySim model *structure* be transferred from one region to another?
 - Which specific model components of DaySim can be transferred from one region to another?
- Can the model *parameters* be transferred from one region to another?

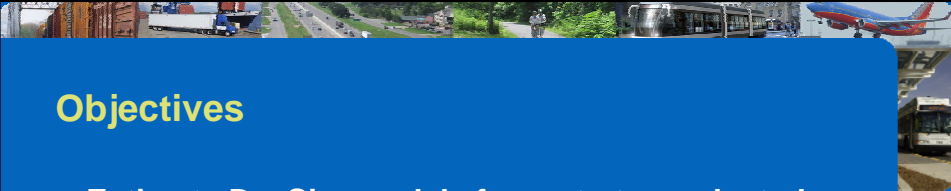





Objectives

- Assemble, process, and analyze the Florida add-on data of the 2009 National Household Travel Survey (NHTS) to:
 - Create tour-based travel datasets to support the estimation of the components of the DaySim framework for different regions in Florida.
 - Undertake comparative analysis of activity-travel (tour) patterns across different regions in Florida.
 - Examine the feasibility of estimating the DaySim model components for different regions in Florida.


2



Objectives

- Estimate DaySim models for up to two selected regions in Florida, using the NHTS data supplemented with the land-use and transportation system characteristics data from the two regions.
- Conduct an analysis of the transferability of the DaySim model components and parameters between the two regions (and potentially across other regions) in Florida.
- Develop feasible activity-based travel demand modeling frameworks for different regions in Florida.

3





Detailed Tasks & Time Line

- **Task 1:** Hold kick-off meeting, form technical advisory panel, and review literature (October 1, 2010 – December 31, 2010)
- **Task 2:** Assemble, process, and analyze the Florida add-on data from the 2009 NHTS (November 1, 2010 – May 15, 2011)
- **Task 3:** Identify up to two regions in Florida for the development of DaySim models (April 15, 2011 – May 31, 2011)
- **Task 4:** Assemble land-use and transportation system characteristics data needed to estimate DaySim models for the selected regions (May 15, 2011 – July 31, 2011)

4



Detailed Tasks & Time Line

- **Task 5:** Estimate the DaySim models for the two selected regions in Florida (June 1, 2011 – November 30, 2011)
- **Task 6:** Conduct an assessment of the transferability of the estimated models between the two selected regions (and potentially across other regions) in Florida (November 1, 2011 – March 15, 2012)
- **Task 7:** Develop feasible activity-based modeling frameworks for different regions in Florida (February 1, 2012 – May 31, 2011)
- **Task 8:** Document all research activities in a final research report (June 1, 2012 – June 30, 2012)

5





Deliverables

- Tour-based NHTS dataset for Florida (Due September 30, 2012)
- Technical Memorandum 1 (Due May 15, 2011)
 - Will document the similarities and differences in the activity-travel patterns across the different regions in Florida (from the research activity performed in Task 2).
- Technical Memorandum 2 (Due November 30, 2011)
 - Will contain the activity-based model parameters estimated for the estimable components of the DaySim model framework (identified in Task 5) for two regions in Florida.

6



Deliverables

- Technical Memorandum 3 (Due March 15, 2012)
 - Will report the results of the transferability research conducted in Task 6.
- Technical Memorandum 4 (Due May 31, 2012).
 - Will provide the results of Task 7, the ABM frameworks developed for different regions in Florida. This deliverable will be provided.
- Final Report (Draft Due June 30, 2012; Final Due September 30, 2012)
 - Summary of all work – updated versions of all Technical Memorandums + tour-based NHTS datasets for Florida

7

