PROJECT NUMBER:
01328

PROJECT TITLE:
Trip Generation and Travel Rate Indices in Alabama

PRINCIPLE INVESTIGATOR:
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PROJECT OBJECTIVE:
The project purpose is twofold. The first purpose is to evaluate the existing trip generation program developed by the Alabama Department of Transportation and used by the state's Metropolitan Planning Organizations (MPOs). The program will be converted to a Windows program and the program parameters will be evaluated to determine the applicability of the existing rates. The second purpose is to develop travel rate indices for each MPO within Alabama. The travel rate indices will be based on the Texas Transportation Institute procedure and will provide Alabama MPOs with an informative evaluation of travel conditions.

PROJECT ABSTRACT:
The Metropolitan Planning Organizations in Alabama are currently responsible for transportation planning activities within their areas. The planning conducted follows the four-step urban transportation planning process of Trip Generation, Trip Distribution, Mode Split, and Traffic Assignment. The initial step of this process, Trip Generation, is the development of trip production and attraction values based on socio-economic characteristics for the region. To assist in this step, a trip generation software was developed several years ago. However, because this software was developed many years ago, there is no user interface or Windows-environment to run the program. One goal of this research project is to develop a version of the software in a Windows-based programming language to improve ease of use for this vital step in the planning process. The other goal of this research is to develop travel rate indices for the MPOs within Alabama. These indices will be used to better understand the travel characteristics of different communities and provide a method to compare communities.

PROJECT TASK DESCRIPTIONS:
1. Identify contact information for each MPO.
2. Examine the Texas Transportation Institute methodology.
3. Examine the existing trip generation program.
4. Identify trip generation rates for other cities
5. Identify data sources for travel rate index calculation.
6. Re-code the trip generation program
7. Examine the trip generation variables.
8. Collect necessary data to support calculation
9. Calculate travel rate indices.
10. Test the trip generation models.
11. Report travel rate indices to Alabama MPOs.

MILESTONES AND DATES:
Startup - Jan 1, 2001
Task 1 – Jan 31, 2001
Tasks 2-4 – Mar 31, 2001
Tasks 5-7 – Jul 31 2001
Tasks 8-10 – Nov 30, 2001
Task 11 – Dec 2001

TOTAL BUDGET:
One-year project: UTCA $39,813; Alabama DOT (SPR funds) $39,813; university matching $11,548; total budget $91,173. The SPR funds are provided by ALDOT through UTCA project 01451.

STUDENT INVOLVEMENT:
It is proposed in this project to employ five students at the University of Alabama in Huntsville. One of the proposed student workers is intended to be a graduate student studying Transportation Engineering at the Master's level. The other four student workers are expected to be either Junior or Senior undergraduate students majoring in Civil Engineering. The students are expected to serve as traffic counters and data collectors to verify the trip generation equations and develop the travel rate indices. The graduate student working on this project will serve as the lead student and will help coordinate the other students.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
UTCA project 01451 is directly related to this project, because 01451 was established to receive and handle ALDOT SPR funds as matching monies for project 01328. UTCA project 99328 “Tranplan and GIS,” is being conducted by Dr. Anderson to provide technical support and training on urban planning and geographic information systems. This project benefits from the relationships established with MPO members in project 99328 and continues the focus on urban transportation to improve planning initiatives.

TECHNOLOGY TRANSFER ACTIVITIES:
The technology transfer activities for this proposed research project include the development of a Windows-based program to perform trip generation and a listing of various travel rate indices for Alabama MPOs.
POTENTIAL BENEFITS OF THE PROJECT:
This project will benefit the state's MPOs by developing a new, Windows-based, trip
generation program to support the urban planning efforts conducted within the state.
This project will also benefit the state's MPOs by providing area specific indices of travel
that can be used to determine the quality of transportation provided in the urban area.

TRB KEYWORDS:
Trip generation, urban planning, travel rate indices.