

June 28, 2018

Mr. John Cooper  
Transportation Director, ALDOT  
1409 Coliseum Boulevard  
Montgomery, AL 36110

RE: Purchase of STREETLYTICS software

Mr. Cooper:

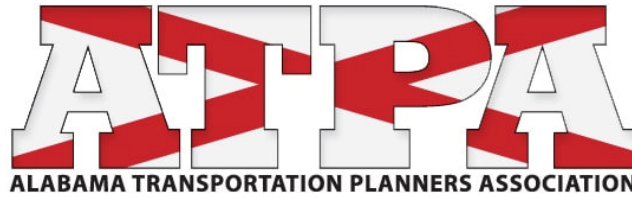
The Alabama Transportation Planners Association (ATPA) represents the staff of all the Metropolitan Planning Organizations (MPOs), and Rural Planning Organizations (RPOs), in the State of Alabama. CUBE VOYAGER is the modeling software used by ALDOT and MPOs for travel demand forecasting. ALDOT and MPOs use CUBE VOYAGER models as decision-making tools to provide justification for billions of dollars in major road projects statewide in the State's 25 year Long Range Transportation Plans.

However, these decisions are based on outdated and potentially inaccurate parameters in the models. In the past 20 years, parts of Alabama have experienced significant jobs and population growth, which has not been reflected in these parameters. The enormity of datasets required to manually update CUBE VOYAGER is time-consuming and expensive.

To address this issue, in 2012, one MPO paid \$125,000 to a consultant to calibrate the CUBE VOYAGER model with updated parameters for their MPO area. In 2018, another MPO budgeted \$150,000 to acquire similar data and make similar model updates.

CUBE VOYAGER is purchased annually by ALDOT from CITILABS and provided to the MPOs. CITILABS has responded to the issues in CUBE VOYAGER and developed new software, STREETLYTICS, which has the ability to update the modeling parameters for every MPO in the State. STREETLYTICS compiles billions of data points from sources including GPS, cellular, Bluetooth, demographics, and traffic counts. The modeling parameters the MPOs are using today were developed in 1995 by Gorove/Slade, using Census data. Knowing that the technology is available to update the modeling parameters, while continuing to use parameters developing from the 1990 Census, is concerning.

The ATPA, and its member MPOs, have reviewed the attached STREETLYTICS proposal from CITILABS. The purchase of STREETLYTICS, as outlined in this proposal, is not a want, but a need. STREETLYTICS will improve every model in the state with updated data for a one-time fee of \$225,000.



The models used by ALDOT and the MPOs are only as good as the data. Therefore, ATPA urges ALDOT to please consider the attached proposal.

Mr. Kevin Harrison, PTP  
Mobile MPO, ATPA President

Mr. Scott Tillman  
Birmingham MPO, ATPA Vice President

Mr. Reginald Franklin  
Dothan MPO, ATPA Secretary/Treasurer

# PROPOSAL FOR ALABAMA DEPARTMENT OF TRANSPORTATION

streetlytics™



**CITILABS**

CITILABS | 2005 N STREET | SACRAMENTO, CA 95811 | USA

**To:** Alabama DOT  
**From:** Citilabs  
**Date:** 5/29/2018  
**Subject:** Streetlytics Data to Support Travel Demand Modeling

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### Background

Travel demand models in the State of Alabama have typically been developed with little data on observed travel occurring in each region. Streetlytics is the first comprehensive understanding of movement in America, which is accomplished by compiling billions of data points from a variety of sources - including GPS, cellular, Bluetooth, demographics, and traffic counts. This project proposes to compile and use Streetlytics data for Alabama's Metropolitan Planning Organization (MPO) modeled regions to deliver data useful in travel demand model development and use. This offers Alabama its first opportunity to systematically build travel demand models using locally observed travel data, rather than relying on average parameters derived from other regions.

### Scope of Work – Travel Demand Model Development Supporting Data

Citilabs will deliver the following data to support travel demand model development activities in the State of Alabama:

1. Origin-Destination (OD) trip matrices for MPO TAZ geographies. OD matrices will represent average annual conditions (M-Th) for consistency with AADT counts, five daily periods, and trip purposes (Home-Based Work – HBW; Home-Based School – HBS; Home-Based Other – HBO; Non-Home Based – NHB; Internal-External-Internal – IXI; and External-External – XX). The data will be for the most recent year available in Streetlytics. This product requires MPO TAZ boundary shapefiles and their associated coordinate system details.
2. Daily household trip rate summary for HBW, HBS, HBO, and NHB trip purposes. This product requires MPO socioeconomic data for households.
3. Trip Length Frequency Distributions by trip purpose, and by distance and time (using loaded network free-flow and congested times). This product requires the network skimming script for each MPO area to ensure consistency with each model's setup.
4. Friction Factors by trip purpose based on the derived average trip lengths.
5. IXI trip end correlation matrix for socioeconomic variables. This product requires the socioeconomic data for each MPO.
6. XY scatter plots of modeled and Streetlytics OD matrices.

### Responsibilities/Expectations

Citilabs will be responsible for compiling data for the applicable MPO regions and delivering the data products to ALDOT. ALDOT will be responsible for coordinating with MPOs to compile TAZ shapefiles, network coordinate system definitions, TAZ socioeconomic data, loaded highway

networks, link variable data dictionaries, Voyager highway skimming scripts, and modeled OD matrices by trip purpose for all applicable MPOs, and delivering them to Citilabs.

### Deliverables

Citilabs will deliver OD matrices in Cube binary format. Other deliverables will be provided in Excel spreadsheets.

The anticipated MPO areas are those where the primary travel demand modeling responsibilities are within the State of Alabama. The assumed regions are:

- Shoals Area
- Decatur
- Huntsville Area
- Gadsden-Etowah
- Birmingham
- Calhoun Area (Anniston)
- Tuscaloosa Area
- Montgomery
- Auburn-Opelika
- Southeast Wiregrass (Dothan)
- Mobile
- Eastern Shore

Each MPO + DOT will be given 1 User ID to access the Streetlytics Web Demo Application.

### Project Budget

The cost to compile and deliver the data products is estimated at \$225,000. Payment by ALDOT to Citilabs under this agreement will be Lump Sum with payments made based on receipt of project deliverables as follows:

\$45,000 (20%) Invoiced upon execution of this agreement.

Data will be delivered for MPOs grouped into four batches, with each batch being invoiced at:

\$45,000 (20%) Invoiced upon delivery of data for batch #1

\$45,000 (20%) Invoiced upon delivery of data for batch #2

\$45,000 (20%) Invoiced upon delivery of data for batch #3

\$45,000 (20%) Invoiced upon delivery of data for batch #4

### Project Schedule

Citilabs will complete all work in accordance with this proposed scope of work within 6 months of receipt of notice-to-proceed from ALDOT. Citilabs staff will work with ALDOT and MPO staff to identify a pattern of regular progress reporting via teleconference, email, or webinar.