

Request for Research Funding for FY 2022-2023

SPR Subpart B Project: SIO-23-01

Requesting Office	Systems Implementation Office	Priority	1 of 1 project
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Proposed Title Trip Generation Study for popular Coffee Shop with drive through and popular Fast Food with drive through

Justification

A traffic impact study may be required for proposed development projects that generate significant vehicular traffic as a result of the development. The purpose of the TIA is to identify the adequacy of the existing street right of way to accommodate any changes in trips generated from a proposed development/redevelopment. If impacts are identified, potential mitigation measures (on-site or off-site) can be proposed and evaluated. Mitigation should be relative to the size of the transportation impact expected. When adverse transportation impacts are expected on Strategic Intermodal System (SIS) facilities, FDOT must work with local governments and other transportation agencies to identify and agree upon mitigation measures. The traffic impact analysis will be used to decide as to whether the location, design of driveway(s) being considered are necessary to provide reasonable access to the private property consistent with the safety and convenience of the public.

Trip Generation Definition is a type of transportation forecasting that predicts the number of trips originating in or destined for a particular traffic analysis zone.

ITE Trip Generation Manual is utilized to determine number of trips generated from a development.

To be able to determine accurately the impact of specific services /Land Uses and to accommodate adequate transportation facilities, there are two specific Land Use services we are requesting research to be conducted in Florida. These two types of land uses are backing up the driveways and impacting the Safety and Operation of the facilities. Having more recent trip generation data will help our decision making and ultimately will help the safety and operation of our systems by providing a safe design driveway. Some of these fast-food and coffee shop trips back up on site at the drive through and as the Que gets longer, it blocks the driveway. We want to look into the average/max length of time a vehicle waits in the queue and or queue lengths/stacking and other factors that create back up during peak hour impacting the Through traffic and pedestrians and bicyclists on the State highway System. We would like to investigate the roadway AADT, number of drive thru lanes, % of trips expected to use drive thru, business type, etc for the expected queue and max queue length. These Land uses as follow:

1- Coffeeshop/High Traffic

ITE’s Land use Code 937 coffee shop with drive through and the site were surveyed in 1990, 2000 and 2010

2- Fast-food restaurant/High Traffic

ITE’s Land use Code 934 Popular fast-food restaurant with drive through and the site were surveyed in 1980,1990, 2000 and 2010

Standard practice in traffic analysis is to recognize that not all inbound and outbound trips to the proposed project will be “new” trips on the roadway system in the vicinity of the proposed project. Some trips to the project site will consist of “pass-by” trips – motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips for fast-food restaurants would be individuals who stop at the project site on the way to or from work/school. For the proposed Coffee shop, the ITE Trip Generation

	Manual does not have a pass-by rate for a Coffee/Donut Shop with Drive Through. Average/max length of time a vehicle waits in the queue and or queue lengths is needed to determine if these pass by trips can be accommodated during Peak Hour.		
Impact	More robust trip generation will determine the impact of a proposed development and with robust data we can provide a safe and efficient facilities for all roadway users		
Affected Offices	Systems Implementation Office. Maintenance Office, Traffic Operations and Design Office		
Existing Work	<p>Learning About and Using the Research in Progress (RIP) Database http://www.trb.org/main/blurbs/176215.aspx</p> <p>As a minimum, the Transportation Research International Documentation (TRID) and the Research in Progress (RIP) online databases should be reviewed by an expert in the research subject matter to assure research effort and resources shall not duplicate prior or ongoing work. TRID: https://trid.trb.org/Results RIP: https://rip.trb.org/</p> <p>No results found</p>		
Keywords Used In Existing Work Search (Cannot leave blank)	Trip Generation. Pass by Trips. Coffee shop with drive through and Fast-food restaurant with drive through		
Related Contracts (Give contract numbers)			
Funding Request	\$250,000	Anticipated Duration	18 months
Project Manager	Gina Bonyani	Contracting Method	RFP
Equipment	Estimated equipment cost (or N/A) TBD	Comments* (understanding leases are preferred, include the proposed use of the equipment, whether lease options are feasible, whether work to be done with equipment could instead be procured through service expenditure, etc.)	
Urgency	Score 1-5 1= highest, most immediate need 1	<p>To be able to determine accurately the impact of specific services /Land Uses and to accommodate adequate transportation facilities, there are two specific Land Use services we are requesting research to be conducted in Florida.</p> <p>These Land Uses are Coffee shop and Fast-Food Restaurant</p> <p>ITE 10th edition sites were surveyed in 1980,1990, 2000, 2010 and 2021</p> <p>This research will help the FDOT permitting approval with ultimately impacts the State roadway operation and safety</p>	
Implementability	Score 1-5 1=greatest likelihood of and proximity to implementing results 1	<p>Comments* (consider both the likelihood of implementation and the length of time and resources required to implement the results of the research.) Identify any prerequisites to, requirements for, or barriers to implementing the anticipated results of this research (e.g., new or change to existing specifications, development of production units of prototype device, legislative change); please indicate if multiple phases of work shall be required</p> <p>This research will help the FDOT permitting approval with ultimately impacts the State roadway operation and safety</p>	

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Project Benefits (Select all that apply and explain)	Quantifiable Benefits (units, dollars, etc...if applicable)	Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits
<input type="radio"/> Materials Enhancement		
<input type="radio"/> Materials Savings		
<input type="radio"/> Time Savings		
<input type="radio"/> Lives Saved/Injuries Prevented		
<input type="radio"/> Other (Explain)		

*Comments should explain and support urgency, financial benefit, and implementability scores