



University Transportation Research Center
RFP Cover Sheet

Title: Automated Pedestrian Counter
Proposal Number: 2008-06
Sponsor: NJDOT
Date Issued: August 15, 2007
Pre-Proposal Meeting: Contact NJDOT by Sept. 1, 2007
Draft Budgets Due: Send to Camille Kamga by October 8, 2007
RFP Closing Date: October 15, 2007

If you plan to apply:

1. Please contact Camille Crichton-Sumners (camille.crichton-sumners@dot.state.nj.us) or Stephanie Nock (609-530-5637) to request a pre-proposal meeting, and so that you will receive information about this meeting if it is held. *This meeting will be your only opportunity to ask questions about this proposal.*

2. If you plan to submit a proposal through UTRC, please notify us by email at nadia@utrc2.org and ckamga@utrc2.org. Please indicate whether you are open to teaming up with faculty at other universities on this project.

Proposal submission guidelines:

Please contact Camille Kamga (ckamga@utrc2.org, 212-650-8087) to discuss submission logistics. After UTRC confirms that the proposals' budgets meet UTRC and NJDOT guidelines, we can either provide you with a UTRC cover sheet, or you can send us the printed proposals for hand-delivery to NJDOT.

Proposals must be prepared in accordance with NJDOT's Information and Instructions for Preparing Proposals. Please visit:

<http://www.state.nj.us/transportation/refdata/research/pdf/techpropresproj.pdf>

For questions about budget preparation, contact: Camille Kamga, ckamga@utrc2.org
NJDOT has not specified a budget or timeline for this project. Please note that matching funds up to \$50k are available from UTRC for projects that are relevant to UTRC's theme of "Planning and Managing Regional Transportation Systems in a Changing World." Decisions about the availability of these funds will be made pursuant to the relevance of the topic and the volume of requests.

New Jersey Department of Transportation

Bureau of Research

RESEARCH PROJECT

Scope and Request for Proposals

2008 Program

Date of RFP
August 15, 2007

Closing Date
October 15, 2007

Automated Pedestrian Counter
Project 2008-06

(Proposals must be prepared in accordance with NJDOT's *Information and Instructions for Preparing Proposals*. Please visit: <http://www.state.nj.us/transportation/refdata/research/pdf/techpropresproj.pdf> **Revised Proposal Evaluation Forms are available for your information on the website.**)

Proposals will be based on the merit of the information contained in the proposal. Budgets will be evaluated separately. Please place three (3) copies of the budget for this project in a separate sealed envelope.

1. RESEARCH PROBLEM STATEMENT, BACKGROUND AND OBJECTIVES

Pedestrian safety is a huge issue in New Jersey. Over the 2001 to 2003 time period, there were 378 pedestrian fatalities and thousands of pedestrian injuries in New Jersey. Pedestrian safety and accommodation is a challenge to plan for because of the lack of easily accessible information on pedestrian volumes and behavior in various contexts. The Department's policy and obligation is to consider the needs of pedestrians in all transportation projects, yet this is particularly challenging due to a lack of information from which sound planning decisions can be made. One component that can assist in making decisions on how to accommodate and plan for pedestrians is having accurate counts of pedestrians in the transportation system. The lack of accurate data related to how many pedestrians use any given sidewalk, path, crosswalk, or other pedestrian facility constitutes one of the most significant barriers to pedestrian inclusive decision making. In order to assess how to best accommodate pedestrians in department projects it is imperative to understand pedestrian behavior, particularly pedestrian flow rates. However, securing accurate pedestrian counts manually is a time-intensive endeavor. The manual collection of pedestrian counts is usually conducted in a limited fashion due to the time and staff resources required. Because of this, this critical piece of information is often unavailable, denying decision makers a crucial piece of information from which to make sound multi-modal decisions.

Automatic pedestrian counting and tracking systems are a technology that is currently available to address this issue. These systems can significantly improve the accuracy and amount of pedestrian data collected, therefore increasing the understanding of pedestrian flow and behavior and allow for better decision making. DOT's in other states have conducted studies on these technologies and assessed the feasibility of their use. It would be beneficial for the department to conduct a literature review on this topic and scope out the costs and feasibility of utilizing these technologies in NJ. It would probably be beneficial to conduct the literature review and then follow that up with a pilot program where a limited number of automated pedestrian counters could be purchased and then deployed. The ease of use and value of the data could then be assessed. This would allow the department to then consider the desirability and feasibility of using automated pedestrian counters at a larger scale.

2. Tasks

[Provide a listing of appropriate general tasks divided into phases based on types of work (e.g., laboratory, field) or by year (e.g., year 1, year 2) or other appropriate milestones]

*The NJDOT is seeking the insight of proposal responders on how best to achieve the research objectives. Proposers are expected to describe a research effort that can realistically be accomplished as **expeditiously as possible**. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach for conducting*

the required research.

PHASE I – Literature Search

Conduct a literature search of the current state of the practice.

After the award of the project, a more comprehensive literature search should be conducted. At the completion of this literature search, the PI will make a presentation to the Research Project Selection and Implementation Panel to discuss their findings and to discuss the appropriate research approach.

PHASE II – Research Approach and Anticipated Results

Clear description of how you will solve the problem and implement anticipated findings. Work may be divided into phases (e.g., Laboratory, Field or Year 1, Year 2) as necessary to clarify tasks. *Exit Criteria* must be developed during this phase.

3. Implementation and Training Plan

The PI must meet with the Research Project Selection and Implementation Panel (RPSIP) and other NJDOT units to present the findings and as appropriate train these personnel in the use the project results.

The PI will develop an implementation plan as per the guidelines provided by NJDOT Research Bureau.

4. Deliverables: [List of minimum deliverables necessary to complete the project]

- Presentation of Summary of Literature Search Results
- Discussion to Support and Refine the Project Tasks
- Project work plan.
- Technical Memorandum on the survey results
- Technical memorandum on the measures that are working or not working
- Technical memorandum on actions taken
- Interim Status reports suitable for Senior Leadership if required
- Quarterly Reports, and
- Final report with appropriate tables, graphs and charts in hard copy version, PDF file format, Word, and on CD ROM. Two copies plus one per RSIP member of each presentation, technical memorandum, draft final report and Final Report (plus 10 copies). The Final Report and Tech Brief are due three (3) months before the end date of the project to allow time for review by the Research Project Selection and Implementation Panel.

5. Contract Time:

The PI must provide anticipated research study duration based on the proposed tasks. Please include 3 months for review and revision of the final report. Final Acceptance will be granted upon receipt of ten copies of the approved final report.

6. Contacts:

A Pre-proposal meeting will be scheduled with interested parties after the RFP's are distributed to refine the objectives and deliverables and to promote a better understanding of the research needs. Questions on this topic **shall not** be directed to any Research Project Manager, Research Customer, or any other NJDOT person. All questions and answers will be addressed **during this meeting**. Contact Camille Crichton-Summers (Camille.CrichtonSummers@dot.state.nj.us) on or before September 1, 2007 to confirm your participation in this meeting.

7. Deadline

**Proposals (10 single-bound copies) are due at NJDOT Bureau of Research no later than
4:00 p.m. October 15, 2007**

This is a firm deadline, and extensions simply are not granted.

Authorization to Begin Work: January 1, 2008--estimated

8. Delivery Instructions:

For private, paid messenger services such as Federal Express, DHL, UPS, etc., or for hand-carried deliveries:

2008 PROPOSAL-NJDOT
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Bureau of Research
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For U.S. Postal Service mail:

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