



New Jersey Department of Transportation
Bureau of Research
RESEARCH PROJECT
Request for Proposal
2022 – 2023 SPR Program

Project Title: Improving Resilience of New Jersey Transportation Infrastructure from Hurricane Damage

Posting No.: 2021-08

Date of RFP Announcement: 08/29/2022

Closing Date: 10/17/2022

Proposals must be prepared in accordance with NJDOT's *Supplemental and Proposals guidelines*. Please visit <https://www.state.nj.us/transportation/business/research/guidelines.shtm> for the most current version.

All proposals must also have a corresponding online PreAward Risk Assessment form completed and submitted by the PIs prior to the RFP closing date and time. This online form can be found at: https://www.state.nj.us/transportation/business/research/risk_assessment_forms.shtm

1 - RESEARCH PROBLEM STATEMENT AND OBJECTIVES

1.1 Problem Statement

There is a need for research into the data on the effectiveness of design strategies that are used to repair infrastructure after extreme events such as hurricanes. This information will help us build more resilient infrastructure by improving our design and repair methodologies. The outcome of this research will provide guidelines and recommendations on hydraulic design, repair, and reconstruction to improve the resiliency of infrastructure design. These guidelines will allow the deployment of design strategies that are proven to be cost effective in the long term. For example, after a hurricane, the primary focus is to restore mobility. Once mobility is restored, it is cost effective to redesign for a more resilient system, so that future extreme events do not cause similar damage to that infrastructure. This data will be used to provide recommendations on how and when major repairs after restoring mobility are effective.

This will help us increase the resiliency of our infrastructure and reduce the cost after an extreme event such as hurricanes.

1.2 Research Objectives

The overall goal of this study is to identify guidelines that will allow the deployment of the design strategies that are proven to be cost effective in the long term. To achieve the goal, the specific objectives of this study are to.

Phase 1: Conduct comprehensive literature review, prepare, and deploy a survey and conduct interviews that determine the extent that transportation infrastructure and other infrastructures were affected.

Phase 2: Based on the research in Phase 1, literature, survey, develop phase II work plan with specific tasks for review and approval.



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- Conduct study of the direct impact of hurricanes
- Conduct data collection from the affected area, including level and type of damage
- Survey and interview the collection assessing the extent that the transportation infrastructure was affected.

Phase 3: Based on the research in Phase 2, develop, the technical requirements and language for design standards and specification and guidelines, recommendations on hydraulic design, repairs, and reconstruction to be incorporated in resilience of the infrastructure design and project development.

The research team shall submit progress reports, make presentations at progress meetings as per RPM request and make possible adjustment of work plan if necessary.

A final report shall include the research details, findings, summary/conclusions, recommendations from the phases. The research team shall recommend with the NJDOT staffs/SMEs input, ex-prospective New Jersey request for possible implementation phase to be separately posted as an implementation RFP.

1.3 Type of Contract

It is proposed that if the Issuing Office enters into a contract because of this Request for Proposal (RFP), it will be a **Cost Reimbursement, Deliverable-Based** contract containing the Standard Contract Terms and Conditions.

2 - BUDGET and CONTRACT TIME

The **TOTAL** project budget shall not exceed **\$350,000 US Dollars**. Budgets will be evaluated separately, and only after a selection has been made as to which proposal is the most qualified based on technical merit.

The PI must provide the anticipated research study duration based on the proposed tasks. Consideration should be given to potential impediments so that adjustments are incorporated into the schedule minimizing the need for time extensions. Contract time shall include sufficient time for the procurement of subcontractors, as well as no less than three months for Final Report review and acceptance. Please be advised that going forward, new task orders having permissible justification will be allowed no more than a one-time extension with the advent of 2 CFR 200.

An 30-month total project duration is preferred.

Please provide a Gantt Chart schedule, by month number (e.g. 1-24), showing tasks start/end, and deliverables. List corresponding deliverables below the chart.



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3 - Oral Presentations

Oral online presentations may be requested as part of this RFP. If required, you will be notified by the Bureau of Research to schedule your oral presentation. They will be held at NJDOT headquarters in Trenton, NJ, attended by the Technical Advisory Panel (TAP), and be limited to no more than an hour, including time for questions and answers.

4 – Deadline

Proposals (no hard copies required) are due at the NJDOT Bureau of Research no later than **4:00 p.m. on October 17, 2022**. Electronic proposal documents (preferred pdf) shall be emailed to Research.Bureau@dot.nj.gov with the subject: *RFP-2022-08 University – PI's name*

Approximate Start Date: 01/09/2023. The official start date is the date that the Bureau of Research obtains a signature from the Assistant Commissioner.

5 – CONTACTS

Interested parties shall send all questions related to this RFP to the Research Bureau Manager by sending an e-mail to Amanda.Gendek@dot.nj.gov or by phone (609-963-2242). Questions on this topic **shall not** be directed to any Research Project Manager, Research Customer, or any other NJDOT person. All questions must be received **on or before 09/16/2022 in order to be answered**.

PROPOSAL DELIVERY INSTRUCTIONS:

Electronic proposal documents (preferred pdf) shall be emailed to Research.Bureau@dot.nj.gov
with the subject: *RFP-2022-08 University – PI's name*
A confirmation of receipt will be sent via email.