

# **REQUEST FOR PROPOSALS**

**LTRC No. 18-5ST, SIO No. DOTLT1000234**

## **INVESTIGATING AVAILABLE STATE-OF-THE ART TECHNOLOGY FOR DETERMINING NEEDED INFORMATION FOR BRIDGE RATING STRATEGIES**

### **PROBLEM STATEMENT**

LADOTD has in its inventory hundreds of bridges for which the as-built plans are missing or incomplete. The bridges may be off-system or on-system. The bridges can be concrete or steel. The main concrete bridge types are precast concrete slabs, concrete slabs, or prestressed concrete channel. The unavailability of needed information will prevent the bridge rater from performing needed calculation to decide whether to post such bridge or not.

### **OBJECTIVE**

The purpose of this RFP is to search and report available technology to determine needed information for DOTD to perform the load rating. Found technology should be able to provide the bridge rater all missing information needed to perform rating calculation. Missing information may include: 1) items that fall under geometry, such as bridge length, bridge width, and other member dimensions, 2) items related to the strength of the bridge materials, concrete and/ or steel, as well as bar locations. The proposers should develop rating strategies based on bridge types. It is expected that the cost for available technology should be provided along with each technology.

### **RESEARCH APPROACH**

The Louisiana Transportation Research Center (LTRC) is seeking the insight of proposers on how best to achieve the research objectives. Proposers shall describe research plans that can be realistically accomplished within the constraints of available funds and contract time as allowed in this RFP.

Proposals must present the candidate's current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach. Task descriptions are intended to provide a framework for conducting the research. The proposal shall address at a minimum, the following tasks:

#### **Task 1 – Literature Review**

Conduct a literature search to determine the available technology for determining needed information for bridge rating strategies. The search should cover other countries, as well, as the United States.

#### **Task 2 – Technology and Cost Reporting**

Report on how each technology is applicable based on bridge type as well as the cost of acquiring such technology or contracting for such services.

Note: This literature search should focus on Concrete Precast Slab (COPCSS), Concrete Slab (COSLAB), and Concrete Prestressed Channel (COPSCH), and to a lesser extent: prestressed girder bridges and steel bridges.

### **Task 3 – Final Report, Technical Summary, and PRC Presentation**

The researcher shall provide a final report that documents the entire research effort for internal future reference and the benefit of others. A Final Draft Report, Technical Summary document (two pages), and summary presentation to the Project Review Committee (PRC) are due three (3) months prior to the project completion date for review and approval. The final report shall include all information gathered in Tasks 1 and 2.

### **DELIVERABLES**

The proposal shall include project deliverables for appropriate tasks. Deliverables shall be due as defined in the proposal. The proposal shall include at a minimum the following deliverables:

- Task 1: Literature Review
- Task 3: Final Report, Technical Summary, and Summary Presentation

### **SPECIAL NOTES**

- A. LTRC research projects will be conducted in accordance with the LTRC Manual of Research Procedures, 2016 edition.

([http://www.ltrc.lsu.edu/pdf/2016/LTRC\\_RESEARCH\\_MANUAL\\_FINAL.pdf](http://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf))

- B. Task descriptions are intended to provide a framework for conducting the research. Louisiana Transportation Research Center (LTRC) is seeking the insight of proposers on how best to achieve the research objectives. Proposers are expected to describe research plans that can be realistically accomplished within the constraints of available funds and contract time as highlighted on page 4. Proposals must present the candidate's current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach. **Any work that is anticipated to be required from LTRC or DOTD forces shall be specifically detailed in the proposal.**
- C. LTRC projects are intended to produce results that will be applied in practice. It is expected that the implementation of the results of this research into practice will evolve as a concerted effort during this project. The final report must contain an implementation plan to include, as a minimum, the following:
- a. The "product" expected from the research;
  - b. A realistic assessment of impediments to successful implementation;
  - c. The activities necessary for successful implementation; and
  - d. The criteria for judging the progress and consequences of implementation.
- D. To assist in the implementation process, the investigators of this research shall present the final results to LA DOTD officials in an oral presentation to be held in

Baton Rouge, Louisiana at LA DOTD Headquarters after acceptance of the final report.

- E. The proposal should include travel to meet with the Project Review Committee for a “kick off” meeting, presentation of interim report, and presentation of the final report at a minimum. Funds budgeted for travel shall be limited to what is necessary for the conduct of the research. Funds shall not be budgeted for conference travel. Funding for technology transfer of research results are available upon request subject to LTRC approval and available funds.
- F. LTRC’s mission includes the support of higher education in Louisiana. Consultant and out-of-state institutions submitting proposals are encouraged to cooperate and collaborate with Louisiana universities for the purpose of sharing of knowledge and increasing transportation expertise in the academic community.
- G. Graduate assistance stipends are allowed. Tuition reimbursement or tuition remission rates applied to stipends are not allowed.
- H. To equitably answer any questions regarding this Request for Proposals, the Louisiana Department of Transportation and Development (LA DOTD) website will be updated with questions and answers and related documents regarding the project.

<http://webmail.dotd.louisiana.gov/agrestat.nsf/WebAdvertisements?OpenPage>

LA DOTD makes these documents available for informational purposes only to aid in the efficient dissemination of information to interested parties. LA DOTD does not warrant the documents against deficiencies of any kind. The data contained within this web site will be periodically updated. Interested parties are responsible to be aware of any updates. Questions regarding this RFP should be submitted in writing to the LTRC contact person. Questions must be received by close of business seven calendar days prior to deadline date.

- I. Consultants and business entities shall be registered with the Secretary of State in order to be able to work in Louisiana prior to award of contract.  
<http://www.sos.la.gov/tabid/1011/Default.aspx>
- J. If Sub-Consultants/Entities are used, the Prime Consultant/Entity must perform a minimum of 51% of the work for the overall project.
- K. LTRC reserves the right to withhold invoice payments for delinquent deliverables as defined in the proposal.

**ESTIMATED COST OF RESEARCH**

\$100,000

**ESTIMATED COMPLETION TIME**

12 Months *(includes 3 months for review and approval of final report - i.e. final report due*

*9 months)*

**LTRC PRIMARY CONTACT**

**Walid Alaywan, Ph.D., P.E.**

Sr. Structures Research Engineer

Phone: (225) 767-9106

Email: [walid.alaywan@la.gov](mailto:walid.alaywan@la.gov)

**AUTHORIZATION TO BEGIN WORK:**

February 1, 2018 (Estimated)

**PROPOSAL FORMAT**

All proposals shall be formatted according to LTRC Manual of Research Procedures. Chapter 3 provides guidance on proposal development.

**PROPOSAL SELECTION**

The Project Review Committee selected for this project will review, evaluate and rank all proposals received using the criteria established on the attached proposal review form.

**DEADLINE FOR RECEIPT OF PROPOSALS**

Ten copies of the proposal must be received by LTRC by the close of business day of January 22, 2018.

Proposals are to be submitted to:

**Samuel B. Cooper, Jr., Ph.D., P.E.**

Director

Louisiana Transportation Research Center

4101 Gourrier Ave.

Baton Rouge, LA 70808