

SCOPE OF SERVICES

The scope of work will consist of the separate phases as described below:

Phase I: Preliminary data collection and qualitative analysis.

1. A preliminary project meeting to discuss the contract and scope of work.
2. Generate the list of first 50 bridges for Phase II.
3. Negotiate the Phase II cost.

Phase II: Rate the first 50 bridges with complete documentation.

1. Load rate the first 50 bridges selected from Phase I.
2. Submit the Final rating report for DOTD approval.
3. Negotiate the Phase III cost.

Phase III: Rate the remaining 180 plus bridges.

Compensation for Phase II and Phase III will be established by Supplemental Agreement upon satisfactory completion and acceptance of Phase I and will be based on a negotiated lump sum fee.

Phase IV: If needed, rate any additional bridge(s).

TASKS

Task 1: Plan and Document Review

- Search and review original as-built plans and shop drawings.
- Search and review original design calculations.
- Establish a history of repairs, rehabilitations, or structural modifications for the bridge structure. Review bridge repair/rehabilitation plans.
- Search and review previous bridge inspection reports, bridge fracture critical reports, load rating reports, structural models and other testing reports as available.

Task 2: Inspection Process (As needed)

Task 3: Analysis and Load Rating

Modeling & Analysis

Perform a system structural model and analysis of the bridge to determine dead load and live load forces in the members. Three-dimensional structural model may be needed for complex bridges.

- The dead load analysis to consider present condition of the bridge.
- Live load analysis should include design loads, legal loads, and routine overload permits.
 1. Design Live Loads: HL-93
 2. DOTD State Legal Loads
 3. DOTD Routine Permit Vehicles
- Secondary and temperature effects may need to be considered.

Load Rating

Rating is to be based on the present condition, capacity and loading of the bridge.

Rate the structure systems using the load rating provisions in the 2008 AASHTO *Manual for Bridge Evaluation*.

Task 4: Report and Recommendations

A preliminary report at 60% submittal, 90% submittal, and a final report are required. An initial meeting will take place presenting the understood scope, the schedule, inspections and rating plans. The meeting must take place within 45 days of the contract execution. Afterwards, bimonthly meetings will be scheduled to present the progress of the project.

Reporting of results will show the rating factors of each control members. The Consultant will provide a summary sheet and a complete QA/QC check for each rating.

Provide conceptual details and cost estimates of recommended retrofits.