

Federal Contract # DTFH61-17D00001 – Task Order #1

LONG-TERM BRIDGE PERFORMANCE PROGRAM

PROGRESS REPORT NO. 5

Report Period: February 1, 2018 – February 28, 2018

Prepared For:

Federal Highway Administration

Prepared By:



A. Account of work performed in this period

1. Coordination and Meetings Between the Contractor, FHWA LTBP Team, and State Highway Departments

The Rutgers team attended a meeting at FHWA Turner Fairbank on 2/23 to provide a through update about all tasks related to task order 1 and task order 2 of the LTBP TSSC contract. The Rutgers team provided the minutes of the meetings on 3/2.

2. Data Gap Analysis

Task 2.1: Examine, Characterize, and Summarize LTBP Protocols for Data Collection Efforts: Work continued on Task 2.1 for each of the four high priority performance issues. Following the high-level analysis (which mainly focused on system level performance), data collection efforts related to specific group and component level performance were analyzed. Additionally, to provide another layer of resolution for the data gap analysis, the results and data obtained from legacy data mining were analyzed. This was performed because although a certain piece of data may be specified in a protocol, it is advantageous to understand if that data is actually (and realistically) being captured and reported. It is anticipated that this statistical analysis will also aid in the refinement of such protocols.

Task 2.2: Develop Set of Data Collection Needs: A detailed, manual literature search continued in February which focused on service life design methodologies, available deterioration modeling approaches, and performance limit states for each high priority performance issue. Several meetings were held with domain experts NJIT and their specific findings and recommendations were incorporated.

Task 2.3: Identify Data Gaps and Collection Strategies: This task is the culmination of the previous two tasks. Once the protocols have been fully examined, characterized, and structured and once the data collection needs have been fully established, a set of data collection gaps will be evident. As a result of this analysis, several gaps were identified and detailed in February.

Task 2.4: Prioritization and Strategic Recommendations: Several gaps were identified in February and recommendations towards data collection strategies and protocol refinements were made.

Project Engineer: 150 hours

Staff Engineer: 70 hours

Project Support: 8 hours

3. Communication

The Rutgers team prepared the electronic version of the monthly progress report and submitted it to FHWA. Moreover, the Rutgers team updated the MS Project file showing the project milestone and submitted it to FHWA.

Co-PI: 8 hours

Project Support: 3 hours

B. Work to be accomplished during the next period

1. Coordination and Meetings Between the Contractor, FHWA LTBP Team, and State Highway Departments

The Rutgers team will attend the 3/6 meeting at TFHRC and will talk to Dr. Zobel to check the necessity of any other meeting for the month of March.

2. Data Gap Analysis

Future work will continue advancing each task for each high priority performance issue. Several meetings are scheduled and will be held with NJIT to ensure the characterizations, identified gaps, prioritization, and strategic recommendations are consistent with current best practices approaches. Additionally, documentation of all findings and analysis will be compiled into a draft report (draft submission due in March) for the untreated bridge decks, bridge joints, and bridge bearings high priority performance issues.

3. Communication

The Rutgers team will prepare the electronic version of the monthly progress report and will submit it to FHWA. Moreover, the Rutgers team will submit the updated MS Project file to FHWA.

C. Problems/Recommended Solutions

No problems encountered during this period.

D. How the results of the work performed supports one or more of the FHWA, DOT and LTBP Goals

All of the work conducted under this task order aims to ensure that the LTBP program collects the data required to realize the following four use cases: (1) Advance research in bridge deterioration and predictive modeling, (2) Advance research in cost analysis, (3) Support improved bridge design methods, and (4) Quantify the effectiveness of bridge maintenance, preservation, repair, and rehabilitation strategies. These use cases encapsulate the overarching goals of the LTBP program and its vision for positively impacting the practice of bridge engineering.

E. Purchases and Rentals

Nothing was purchased or rented during this period.

F. Travel Details for Reporting Period

No travel occurred during this reporting period.

G. Current and Cumulative Expenditures (cost shown includes benefits and overhead)

Institution	Current Expenditures 2/1/2018 – 2/28/2018	Cumulative Expenditures 10/1/2017 – 2/28/2018
Rutgers, the State University of New Jersey	\$ 25,255.00	\$ 128,777.00
Bridge Intelligence LLC	\$ 1,008.00	\$ 5,166.00

H. Subcontractor's Progress Report

Sub-recipient Name: Bridge Intelligence LLC

Subaward No: 00000286

Principal Investigator: Hooman Parvardeh

LTBP TSSC

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PROGRESS REPORT NO. 2

For the Period from 2/1/2018 through 2/28/2018

A. Accomplishments/Work Performed

The following is a complete account of all accomplishments and work performed on each task during this reporting period.

Task 1: (Coordination and Meetings between the Rutgers and FHWA LTBP Team)

During this period, Mr. Parvardeh was invited to a meeting at FHWA TFHRC on 2/23. The purpose of the meeting was to provide a through update about all tasks related to task order 1 and task order 2 of the LTBP TSSC contract. Mr. Parvardeh attended multiple preparation meeting at CAIT to prepare for the actual meeting. Mr. Parvardeh attended the meeting and prepared the minutes of the meeting afterwards. However, this effort is charged under task 1 of the second task order.

Number of hours during this period: 0 hours

This task is approximately 18% complete.

Task 2: (Data Gap Analysis)

Nothing was done during this period.

Number of hours during this period: 0 hours

This task is approximately 10% complete.

Task 3: (Communication)

During this period, Mr. Parvardeh performed the following tasks:

- Modified the MS Project to be ready for monthly progress submittal
- Prepared and submitted monthly progress report for February including updated MS project

Number of hours during this period: 8 hours

This task is approximately 23% complete.

B. Work Anticipated During the Next Period

During the next period, Mr. Parvardeh will perform the following tasks:

- Set up, prepare, participate in the monthly conference call
- Prepare and submit minutes for the monthly conference call
- Support the LTBP Data Gap Analysis effort
- Prepare and submit monthly progress report

C. Changes /Problems

None.

D. Participants & charged Level of Efforts

Personnel Name	Role/Contribution	Total Hours	Billed Cost
Hooman Parvardeh	Principal	8	\$ 1,008.00

E. Travel

None.