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

#### LONG-TERM BRIDGE PERFORMANCE PROGRAM

PROGRESS REPORT NO. 9

Report Period: June 1, 2018 – June 30, 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 had meeting with FHWA on 6/20th at TFHRC. The minutes of the meeting was submitted to the FHWA personnel present at the meeting.

Co-PI: 3hours

#### 2. Data Gap Analysis

Efforts in June were not based strictly on the five tasks outlined in the initial workplan, but instead primarily focused on providing initial guidance and details regarding the implementation of the recommendations for construction related data and maintenance related data both at a high level and specific to the high priority performance issues. Construction and maintenance related data gap recommendations were selected for implementation study based on the severity of each gap and the relative effort/cost anticipated to address it. The goal is to provide a path to high impact in expanding the effectiveness of the data collection protocols relative to the resource investment (time and otherwise) made by the program. An initial draft was completed which explored the details and feasibility regarding each recommendation suggested in the data gap analysis summary. Of the recommendations explored, maintenance related data seems the most viable option pursue based on its relative accessibility and the potential positive impact of obtaining the data type to the programs goals.

PI: 123 hours

Co-PI: 5.5 hours

Program Manager: 45 hours

Project Engineer: 183.49 hours

Technician: 128.8

**Project Support: 9 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: 9 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 meet with reach out to FHWA to set up a meeting for the month of July.

#### 2. Data Gap Analysis

Efforts in July will be based on the request of FHWA.

#### 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 Peri |
|--------------------------------------|
|--------------------------------------|

None.

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

| Institution                                 | Current Expenditures<br>6/1/2018 - 6/30/2018 | Cumulative Expenditures<br>10/1/2017 – 6/30/2018 |
|---|--|--|
| Rutgers, the State University of New Jersey | \$ 49,736.25                                 | \$ 217,848.62                                    |
| Bridge Intelligence LLC                     | \$ 2,275.00                                  | \$ 15,060.53                                     |
| New Jersey Institute of Technology          | \$ 22,189.18                                 | \$ 34,369.72                                     |

H. Subcontractor's Progress Report



Sub-recipient Name: Bridge Intelligence LLC
Subaward No: 00000286
Principal Investigator: Hooman Parvardeh

# LTBP TSSC Federal Contract # DTFH61-17-D00001

PROGRESS REPORT NO. 6 For the Period from 6/1/2018 through 6/30/2018

## 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 developed slides for the presentation which was presented to FHWA on 6/20. Furthermore, Mr. Parvardeh met with the NJIT team to discuss the progress of the project.

Number of hours during this period: 3 hours

This task is approximately 40% complete.

### Task 2: (Data Gap Analysis)

During this period, Mr. Parvardeh worked on the feasibility of getting access to maintenance data from states. Mr. Parvardeh reached out to a few states and people from AASHTO to get information about the availability of the maintenance data. Moreover, Mr. Parvardeh reviewed the NCHRP study by George Hearn regarding maintenance DB.

Number of hours during this period: 5.5 hours

This task is approximately 42% complete.



# Task 3: (Communication)

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

- Prepared and submitted monthly progress report to FHWA
- Updated the MS project file and submitted it to FHWA

Number of hours during this period: 9 hours

This task is approximately 50% 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         | 17.5        | \$ 2,275.00 |

Below is a breakdown of level of effort per task:

| Task 1 | Task 2  | Task 3 |
|--------|---------|--------|
| 3      | 5.5 hrs | 9 hrs  |

#### E. Travel

None.



### **Sub-recipient Name:** New Jersey Institute of Technology

**Subaward No:** 00000290

**Principal Investigator:** Matthew P. Adams

# LTBP TSSC – Task Order 1 Federal Contract # DTFH61-17-D00001 For the Period from 6/1/2018 through 6/30/2018

# A. Accomplishments/Work Performed

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

#### Task 2 Data Gap Analysis

The research group from NJIT met with the Rutgers University research team in early June to discuss the status of the Data Gap Analysis. NJIT provided an update on the literature review of cost, effectiveness, preservation, and maintenance methods used by different agencies. The group reviewed and discussed challenges in extracting maintenance data. Gaps in the literature on corrosion induced damage and chloride thresholds were reviewed during this period.

Number of hours during this period: 209.7

### B. Work Anticipated During the Next Period

For the next period, the team at NJIT will continue to assist and work on directed documents as directed by Rutgers and FHWA.

## C. Changes / Problems

None.

# D. Participants & charged Level of Efforts

| Personnel Name | Role/Contribution | Total Hours | Billed Cost |
|----------------|-------------------|-------------|-------------|
| Aaron Strand   | Technician        | 104.9       | \$69/hour   |
| Matthew Adams  | Project Engineer  | 52.4        | \$127/hour  |



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|-----------------|------------------|------|------------|
| Matthew Bandelt | Project Engineer | 52.4 | \$127/hour |
|                 |                  |      |            |

# E. Travel

None.