**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Lead Agency: **----** **Utah Department of Transportation ----**

**INSTRUCTIONS:**

*Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.*

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| **Transportation Pooled Fund Program Project #**  *(TPF-5(257)* | | **Transportation Pooled Fund Program - Report Period:**  \_ Quarter 1 (January 1 – March 31)  \_ Quarter 2 (April 1 – June 30)  \_ Quarter 3 (July 1 – September 30)  X Quarter 4 (October 1 – December 31) | |
| Project Title: Evaluation of Spliced Sleeve Connections for Precast RC Bridge Piers | | | |
| **Name of Project Manager(s):**  **Abdul Wakil** | **Phone Number:**  **801-633-1034** | | **E-Mail**  **awakil@utah.gov** |
| **Lead Agency Project ID:**  **5H06604H, UT11.502** | **Other Project ID (i.e., contract #):**  **TBD** | | **Project Start Date:**  **TBD** |
| **Original Project End Date:**  **TBD** | **Current Project End Date:**  **TBD** | | **Number of Extensions:**  **N/A** |

Project schedule status:

X\_ On schedule \_ On revised schedule \_ Ahead of schedule \_ Behind schedule

Overall Project Statistics:

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| **Total Project Budget** | **Total Cost to Date for Project** | **Percentage of Work**  **Completed to Date** |
| **$110,000** | **$0.00** | **0%** |

***Quarterly*** Project Statistics:

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| --- | --- | --- |
| **Total Project Expenses**  **and Percentage This Quarter** | **Total Amount of Funds**  **Expended This Quarter** | **Total Percentage of**  **Time Used to Date** |
| $0.00, 0% | $0.00 | 0% |

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| **Project Description**:  The splice sleeve connection is being considered as the method of choice for connecting precast concrete bridge elements. The purpose of this project is to perform experiments to evaluate the performance of the splice sleeve connection between a reinforced concrete square bridge column and a bridge footing (Type I) or a reinforced concrete square bridge column and a bridge cap beam (Type II) in a seismic setting. This information is very valuable for construction of bridges using Accelerated Bridge Construction in areas with seismic activity.  The present proposal aims at performing cyclic tests to verify the capacity of the splice sleeve connection in seismic regions for connecting precast elements such as footings and columns or columns and cap beams.  The splice sleeve connection is being considered as the method of choice for connecting precast concrete bridge elements. The purpose of this proposal is to perform experiments to evaluate the performance of the splice sleeve connection between a reinforced concrete square bridge column and a bridge footing (Type I) or a reinforced concrete square bridge column and a bridge cap beam (Type II) in a seismic setting. This information is very valuable for construction of bridges using Accelerated Bridge Construction in areas with seismic activity.  Work in this area is very limited. However, every effort will be made to identify any work related  to this issue and will be reviewed with the purpose of adding value to the proposed tests. The tests envisioned are designed to be approximately half-scale compared to typical bridge dimensions. The dimensions of the column for Type I tests are 21 in. x 21 in., with 6#8 mild steel reinforcing bars and a height of 8 ft and 6 in. The dimensions of the footing for Type I connections are 6 ft long x 3 ft wide x 2 ft deep. The column and footing details for the column to footing connection (Type I) are shown in Figure 1. Note that Type I connections will utilize the NMB splice sleeve system. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):**  Currently, the scope of work (work plan) for this project has been drafted. The project work plan will be circulated for review to the entire project Technical Advisory Committee in a week period.  A meeting has already taken place between the research project investigator and UDOT bridge structural designers.  Contacts were made by the Project Manger with New York Sate and Texas Department of Transportation. |
| **Anticipated work next quarter**:  It is anticipated that in the present quarter, the precast concrete column, footing, and cap beam will be built. In preliminary discussions, it has been determined that NMB splice sleeve connections will be used to connect the column to the footing (Type I), and Interlock connections will be used to connect the column to the cap beam (Type II). |

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| **Significant Results:**  There are no results to report at the present time. |
| **Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that**  **might affect the completion of the project within the time, scope and fiscal constraints set forth in the**  **agreement, along with recommended solutions to those problems).**  None. |

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| **Potential Implementation:**  It is anticipated the Utah DOT will implement the findings of this research once it is completed in Accelerated Bridge Construction (ABC). Hopefully New York State Department of Transportation and Texas Department of Transportation will be able to implement them too. |