**Click here to enter Program or Project Title**

**Progress Report – Click here to enter a date.**

**Title:** Assessment and Repair of Prestressed Bridge Girders Subjected to Over-height Truck Impacts Pooled Fund Project

**Project Number:** TR202011

**Principal Investigator (PI):** Mohamed ElGawady PhD (PI)

**Co-PI(s):** William Schonberg PhD, PE (Co-PI)

| **Award date:** | **1/1/2021** | | |
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| **Scheduled completion date:** | **12/31/2023** | **% of project completed to date:** | **81%** |
| **Total budget:** | **$**805,000 | **% of budget expended to date:** | **72%** |
| **Draft report due:** | **9/30/2023** | **Final report due:** | **12/1/2023** | |

Provide a short description of the **work currently underway**.

*Use* [*additional notes section*](#bookmark=id.1t3h5sf) *if you need to provide more information.*

***Task 2. Experimental testing of bridge girders subjected to lateral impacts:***

* 2nd girder is being prepared for testing and will be ready for testing in two weeks after modifying the test setup to revise the boundary conditions.
* A second set of beams (five girders) is placed at Core slab (see pictures 1 through )

Provide a short description of the **noteworthy activities/accomplishments** during this reporting period.

*Use* [*additional notes section*](#bookmark=id.1t3h5sf) *if you need to provide more information.*

***Task 5: Repair Evaluation:***

* Preparing the flexural testing of the 1st repaired beam. Fig. 2 through 5 show the repaired beam and main results.

| (a) | |
| --- | --- |
| (b) | |
| (c)  Fig. 1: Placing strain gauges on steel cages for the second set of girders. | |

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| Fig. 2: Repaired beam 1 ready for testing (a) Front view of repaired girder, and (b) Rear view of the repaired girder with flexural test setup | |

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| Fig. 3: Measuring the beam deflection at mid-span using LVDT |

|  |  |
| --- | --- |
| (a) | (b) |
|  |  |
| (c) | |
| Fig. 4: Damage of the strengthened beam (a) Flexure-shear crack at 70 kips, (b) Debonding of Transverse CFRP, and (c) Rear view of damaged beam | |

|  |  |
| --- | --- |
| (a) | (b) |
| Fig. 5: Test results (a) Load - deflection curve at midspan of girder, and (b) Longitudinal FRP strains | |