UTC Project Information	
Project Title	DEVELOPMENT OF LOW-CARBON CONCRETE MATERIALS INFUSED WITH BIOCHAR FOR BRIDGE APPLICATIONS
University	Texas A&M University/Texas Engineering Experiment Station
Principal Investigator	Jeffrey W. Bullard
PI Contact Information	jwbullard@tamu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	ABC-UTC funds: $140,000 Match funds : $70,000
Total Project Cost	$ 210,000
Agency ID or Contract Number	69A3552348322
Start and End Dates	January 2, 2024 - December 31, 2024
Brief Description of Research Project	Concrete's high carbon footprint is an ongoing concern for infrastructure sustainability and environmental stewardship. A primary strategy in the quest for low-carbon concrete is to replace a portion of the portland cement with pozzolanic wastes generated by other industrial or societal activities. Biochar is a product of biowaste combustion. Some sources are pozzolanically active and can therefore enhance concrete's later-age mechanical and durability properties of concrete. In addition, biochar efficiently absorbs atmospheric CO2, a first step in CO2 sequestration in concrete by carbonate mineralization. But despite this potential multifunctional nature of biochar, its assured use in concrete for bridge elements will not be realized until its influences on fresh state workability and early strength development are better understood and controlled. New materials enabled by this research will significantly decrease anthropogenic GHGs, increase the resilience and sustainability of civilian infrastructure, and provide a sink for biowaste materials that otherwise would be deposited in landfills.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The outcomes will be tracked and reported once they are identified.

Impacts/Benefits of Implementation (actual, not anticipated)	The impacts will be tracked and reported once they are identified.
Web Links • Reports • Project website	https://abc-utc.fiu.edu/research-projects/development-of-low-carbonconcrete-materials-infused-with-biochar-for-bridge-applications/