Urban Mining Industries, LLC

Project Name: Decarbonization of Concrete using a Ground Glass Pozzolan
Applicant: Urban Mining Industries, LLC
Location: Indiantown, FL & Baltimore, MD
Status: Round 2 Selectee
Federal Cost Share: $37,117,831

Project Description:
Urban Mining Industries, LLC (UMI) is targeting Baltimore, MD and Indiantown, FL to develop manufacturing plants that will convert recycled glass, most of which would have otherwise gone to landfill, into aground glass pozzolan (GGP), called Pozzotive®.

When used to replace carbon-intensive cement, Pozzotive® can drastically reduce embodied emissions while increasing resistance to road salts and increasing reflective properties. Pozzotive® will have a carbon footprint of about 6% of the cement it replaces in concrete mixes and can replace up to 50% of cement in concrete. In collaboration with DOE, UMI will leverage earlier work and experience from its smaller, first- generation production facility inCT to create more efficient, next generation facilities that will serve as models for a commercially viable expansion effort into other new markets nationally. The global supply chain of pozzolans has traditionally relied on fly ash and slag, which are byproducts of coal combustion and blast furnaces. However, the closure of coal-fired power plants and blast furnaces has led to a significant decrease in the availability of fly ash and slag. This project aims to introduce a high- quality, clean and readily available pozzolan substitute into the market.

Community Benefits Plan:
UMI is dedicated to forming strategic partnerships with both communities in this project. These collaborations are focused on engagement with workforce development programs and jobseekers, including those from their youth-serving and justice-impacted programs, in order to provide employment opportunities. Additionally, UMI recognizes the value of the transferable skills possessed by the many employees affected by recent local plant closures and will actively recruit from those areas. Overall, thisp roject will create about 20 new skilled jobs with high paying hourly wages per site. the climate benefits to local communities by reducing carbon emissions in new construction and lowering the impact of heat island effect (that disproportionately impacts disadvantaged areas) are significant. An enhanced resistance to road salt means a long life for the infrastructure in those same communities. Moreover, diverting glass, a non-degradable material, from landfills extends its lifespan and decreases the need for additional landfills, particularly in underprivileged regions.